

DOS BULLETIN



NR. 3

APRIL 2008

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DOS BESTYRELSE

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Betingelser for optagelse i DOS

Alle læger med dansk autorisation kan optages i Dansk Ortopædisk Selskab.
Anmodning om indmeldelse i DOS kan kun ske via hjemmesiden:
www.ortopaedi.dk
Aktivér linket "Meld dig ind i DOS" og udfyld ansøgningen sammen med oplysninger om personlige data.

DOS-Bulletin

Udgiver

Dansk Ortopædisk Selskab

Ansvarshavende redaktør

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Web-page

www.ortopaedi.dk

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DEADLINES FOR NÆSTE BULLETIN

ANNONCER: Fredag den 2. maj 2008

TEKST: Fredag den 23. maj 2008



Dansk Ortopædisk Selskabs Forårsmøde 2008

**Onsdag den 07. maj til fredag den 09. maj
Aalborg Kongres og Kulturcenter**

Klinik Aalborg, Ortopædkirurgien, Region Nordjylland har nu atter æren af i samarbejde med Dansk Ortopædisk Selskabs bestyrelse at byde velkommen til selskabets forårsmøde i Aalborg.

Det glæder vi os meget til og ser frem til et par udviklende dage med et spændende videnskabeligt program, en inspirerende udstilling og et muntert socialt samvær i et forårsklædt Aalborg.

Afdelingens læger ser frem til at modtage et talstærkt fremmøde af kolleger og ledsagere under mødet. Torsdag aften er der traditionen tro arrangeret gallamiddag med underholdning og efterfølgende dans til tonerne af Søren Kaalunds Band.

Vi har i år afstået fra at arrangere ledsagetur på grund af et meget beskedent deltagerantal sidst. Mødet afholdes i Aalborg Kongres og Kulturcenter der er beliggende meget tæt på bycentrum. Her er der gode muligheder for kulturelle oplevelser og shopping på egen hånd eller sammen bekendtskaber fra torsdagens fest.

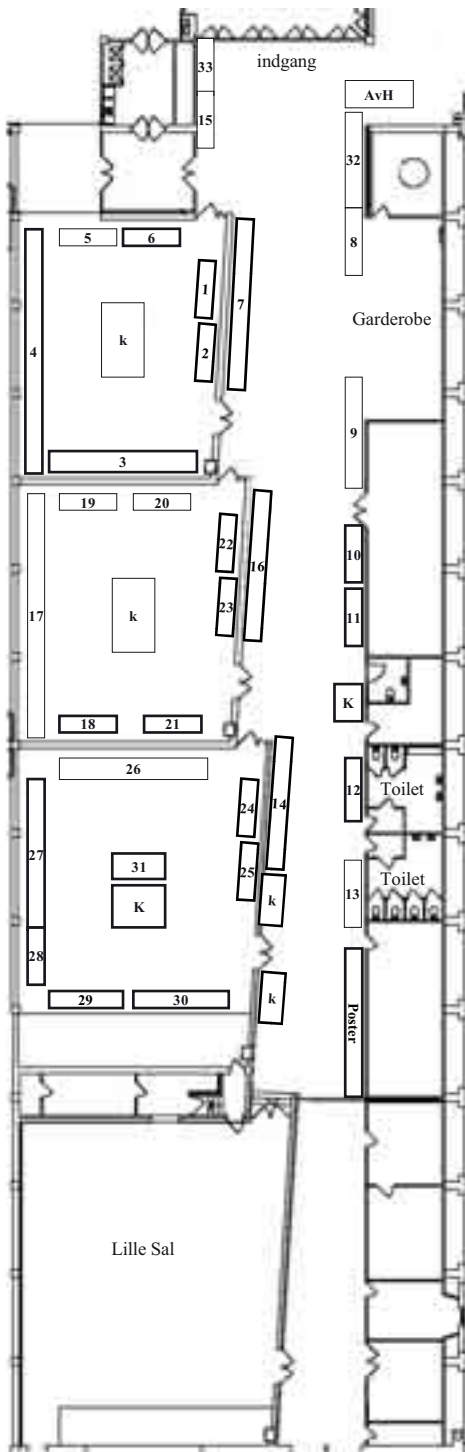
På vegne af afdelingens læger ønskes I herved velkommen til Forårsmødet 2008.

Hans Peter Jensen

Udstillere

<i>Firma</i>	<i>Stand nr.</i>	<i>Areal</i>
Astra Tech A/S	24	3
Allergan Inc	6	3
B. Braun Aesculap	13	3
Biomet Danmark ApS	4	12
Creamer Medical	10	3
DJO Nordic A/S	11	4
Robert Fischer ApS	1	3
Hemax Medical ApS	28	3
KCI Medical ApS	21	3
KEBO MED	20	3
LJ Medical ApS	32	6
Medtronic Danmark A/S	5	3
Mærsk-Andersen A/S	8	4
NMS A/S OP	18	3
NMS A/S ORTO	17	13
NMS A/S ENDO	19	3
Norpharma A/S	29	4
Noscomed	23	3
Ortoconcept Scandinavia	14	7
Ortos A/S	22	3
Ortotech	26	8
Osmedic ApS	12	3
Pfizer Danmark	15	3
Protesekompagniet A/S	7	9
Sahva A/S	2	3
Scandinavian Customized Prosthesis as	31	3
Simonsen & Weel A/S	33	3
Smith & Nephew A/S	3	7
Sports Pharma Ortosupport ApS	25	3
Stryker Danmark	16	9
Swemac Orthopaedics ApS	9	6
Synthes A/S	27	8
Viking Medical Scandinavia ApS	30	5

Udstilling





EFORT 2008 – Nice, France

Advanced update on Orthopaedics and Traumatology

29 May – 1 June 2008

Instructional Courses, Case Discussions, Symposia, Free Papers and Hands-On experience with the Experts meet Experts sessions



Be part of it!
Register at
www.efort.org

Congress Highlights

- Hip problems: Current solutions
- Knee: Always progression
- Trauma: Leaping forward
- Shoulder/Elbow: Novel approaches
- Foot/Ankle: Today's solutions
- Paediatrics: A fresh look
- Sports: The evolving athlete
- Hand and wrist: Original answers
- Bone Tumours: Functional solutions
- Osteoporosis: The silent epidemic
- Basic Science: The future
- Infection and inflammation
- Disease burden and health care policy
- Pain control

Science, Education, Culture

In 2008 the European Orthopaedic Community meets in Nice

DOS Forårsmøde 2008

07. – 09. maj Aalborg
Onsdag 07.05.08

13:00 – 16:00 Lokale A:

Forum for uddannelsesansvarlige overlæger. Høring: Faglige bedømmelseskriterier for hoveduddannelsen samt information omkring de fremtidige udvælgelses- og ansættelsesprocesser.

13:00 – 17:00 Lokale B:

Dansk Børneortopædisk Selskab
Symposium: ”Albuenære frakturer”

13:00 – 17:30 Lokale C

Workshop for turnus- og introduktionslæger i ortopædkirurgi.

Dansk Ortopædisk Selskabs Forårsmøde 8 - 9 maj 2008

Mødeoversigt

Torsdag 8.5.08

Room A	Room B
12:00 - 13:00 Frokost	
13:00 - 14:00 Ryg foredrag Chairmen: <i>Benny Dahl og Lars Nimb</i>	13:00 - 14:00 Knækirurgi - foredrag Chairmen: <i>Poul Torben Nielsen og Per Wagner</i>
14:00 - 15:00 Kaffe og udstilling	
15:00 - 17:00 Generalforsamling	
19:00 - ? Galla middag	

**Indtegning på bordplan til middagen
slutter torsdag kl. 15:00!!!**

Påklædning: Smoking eller mørk tøj.

**Der fremsendes billetter til frokosten torsdag,
men ikke til middagen.**

Frokostbilletten skal afleveres til betjeningen.

Aalborg Kongres og Kulturcenter, Aalborg

Mødeoversigt

Fredag 9.5.08

Room A	Room B
08:30 - 10:30 Hoftekirurgi – foredrag <i>Chairmen: Niels Krarup og Per Kjærgaard-Andersen</i>	08:30 - 10:30 Ortopædkir. grundforskning <i>Chairmen: Kjeld Søballe og Haisheng Li</i>
10:30 - 11:00 Kaffe og Udstilling	
11:30 - 12:00 DOS – Honorary Lecture: John Leong, Hongkong <i>Challenges in Orthopedics</i>	
12:00 - 13:00 Børneortopædi, Traumatologi og Ortopædkir. infektioner <i>Chairmen: Bjarne Møller-Madsen og Knud Stenild</i>	12:00 - 13:00 Overekstremitetskirugi <i>Chairmen: Niels Søb og Bo Sanderhoff</i>
13:00 - 14:00 Frokost og Udstilling	
14:00 - 14:45 DOS – Professoral tiltrædelsesforelæsning Benny Dahl ”Rygkirurgi – fra pedikelskruer til polymorfier”.	
14:45 - 15:30 Kaffe og Udstilling	
15:30 - 17:00 Posters og Uddelinger <i>Chairmen: Lars Konradsen og Torben Bæk Hansen</i>	

Dansk Ortopædisk Selskabs Generalforsamling

**Torsdag den 08. maj 2008 kl. 15:00
Aalborg Kongres og Kulturcenter**

DAGSORDEN:

- 1) Valg af dirigent
- 2) Formandsberetning
 - Forslag til vedtægtsændringer
- 3) Udvalgsberetninger
 - a) Uddannelsesudvalget
 - b) EFORT
 - c) UEMS
 - d) NOF
 - e) Beretning fra arbejdsgrupper og øvrige udvalg
 - ii) DRG
 - g) Beretning fra Fagområderne
 - Dansk Selskab for Håndkirurgi
 - DPOS
 - DOTS
 - DSSAK
 - DFAS
 - DSHK
 - Ryginteressegruppen
- 4) Kassererens beretning
 - a) Regnskab
 - b) Kontingent 08 – 09
- 7) Dansk Ortopædisk Selskabs Fond
 - a) Regnskab
- 5) Valg til bestyrelse og udvalg
- 6) Godkendelse af Referenceprogrammet, Hoftenære frakturer
- 8) Eventuelt

Forslag til vedtægtsændringer

§1: Dansk Ortopædisk Selskab har til formål:

- at fremme ortopædkirurgisk videnskabeligt arbejde og samarbejde såvel nationalt som internationalt.
- at fremme dansk ortopædkirurgisk uddannelse.
- at fremme dansk ortopædkirurgisk virksomhed ved et nært samarbejde med andre videnskabelige selskaber.
- at fremme ortopædkirurgisk forskning, uddannelse og efteruddannelse ved at yde økonomisk støtte hertil efter indstilling fra bestyrelsen.

foreslås ændret til

§1: Dansk Ortopædisk Selskab har til formål:

- **at fremme danske ortopædkirurgers interesser, såvel på offentlige sygehuse som i privat regi.**
- at fremme ortopædkirurgisk videnskabeligt arbejde, **uddannelse** og samarbejde så vel nationalt som internationalt.
- **at fremme dansk ortopædi gennem samarbejde med andre videnskabelige selskaber.**

§10: Selskabet afholder mindst 2 møder årligt, fortrinsvis forår og efterår.

foreslås ændret til

§10:

Selskabet afholder mindst et årligt møde.

§13

Dansk Ortopædisk Selskab deltager i den centrale vurdering af ansøgere til hoveduddannelsesstillingerne i ortopædisk kirurgi.

Vurderingsudvalget er nedsat af **Danmarks Amtsrådsforening** og næstformanden deltager i vurderingsudvalget.

Vurderingsudvalget indstiller derefter ansøgerne til ansættelse i regionerne og videre behandling i de lokale ansættelsesudvalg.

foreslås ændret til

§13

Dansk Ortopædisk Selskab deltager i den centrale vurdering af ansøgere til hoveduddannelsesstillingerne i ortopædisk kirurgi.

Vurderingsudvalget er nedsat af **Danske Regioner** og næstformanden deltager i vurderingsudvalget.

Vurderingsudvalget indstiller derefter ansøgerne til ansættelse i regionerne og videre behandling i de lokale ansættelsesudvalg.

Formandens beretning til generalforsamlingen i Dansk Ortopædisk Selskab den 08. maj 2008

Efter generalsamlingen i Århus kunne bestyrelsen byde Benny Dahl velkommen som ny sekretær og Sajida Afzal som DOS Bulletin redaktør. De store arbejdsopgaver for bestyrelsen i år har givet dem en superstart. En stor tak til hovedkursusleder, overlæge Per Wagner Kristensen for god ledelse af A-kurserne.

Vi vil samtidig byde velkommen til følgende nye medlemmer af DOS:

Abdullah	Hamidullah
Adwan	Mohamad Mahmoud
Al-Fadli	Dhia Khalaf Shaya
Al-Hashimi	Wisam Mahdi Hassan
Al-Rubaie	Haider A. Finjan
Alva-Jørgensen	Jens Peter
Andersen	Poul Sondrup
Andrea	Linda Christie
Andreasen	Thomas Maaløv
Balslev-Clausen	Andreas Peter
Barckman	Jeppe
Blom	Claes Sjørsløv
Blus-Pedersen	Pernille
Brorson-Hansen	Stig Christian
Christensen	John Tømmerby
Dimon	Tine Jochewet Ravn
Dorland	Allan Bache
El-Mansour	Imad Ata
Elsø	Rasmus
Eriksen	Jamila Stephanie Hussein
Falstie-Jensen	Thomas
Garde	Lasse
Gede	Christian
Ghahremanlou	Reza
Gottlieb	Hans

Gottliebsen	Martin
Hansen	Søren Kring
Hare	Kristoffer Borbjerg
Hassan	Basim Kamil
Hermann	Andreas E. Bording
Holtz	Kenneth Brian
Homilius	Morten
Jacobsen	Peter Kraglund
Jautji	Riadh Wadiah Yousif
Jepsen	Mia
Juhl	Henrik Friis
Karbo	Ture
Karim	Saad Mohammad Ali
Kirkeby	Lone
Kjærgaard	Janni
Kjær-Hansen	Karin Birgitte
Klit	Jakob
Lange	Bibi
Larsen	Jeanette Haar
Larsen	Sten
Laxafoss	Erling
Lindblad	Bent Erling
Lorentzen	Jan Søbo
Lundin	Kira
Maki	Ghazwan Abbas
Malik	Arfan Khuram
Matthiesen	Iben Birgit Gade
Najib	Najib Ahmad
Nielsen	Reno E. Tilgreen
Nygaard	Tobias
Olesen	Ulrik Kähler
Paulsen	Anders Wallin
Pedersen	Morten Bøgehøj
Pedersen	Tim Houbo
Petersen	Abida Shaheen
Pfeiffer	Philip Kramer
Plaschke	Hans Christian
Priess-Sørensen	Lotte

Radi	Dariush Nikouvadad
Ravn	Christen
Rechter	Anke Simone
Rix	Flemming Gothard
Rousing	Rikke
Schjøtz	Lars
Schroll	Lena
Skafdrup	Kjeld Bull
Skjærbæk	Mette Schandorff
Stapulioniene	Jolita
Svensson	Arne Læssøe
Szkopek	Kenneth Quaade
Søndergård-Petersen	Steen
Sørensen	Thomas Michael Nissen-Juul
Toftehøj	Hans-Ulrik
Tranberg	Finn Henrik
Vainorius	Dovydas
Valancius	Kestutis
Varnum	Claus
Vesterby	Martin Svoldgård
Villadsen	Allan
Vilsner	Henrik
Walbom	Jonas
Winther	Annika Kloster Norland
Wong	Christian Nai-En

Dansk Ortopædisk Selskab glæder sig også over besættelsen af 3 nye professorater i Aalborg, Århus og København, hvilken giver en yderligere konsolidering af faget.

I årets løb er følgende medlemmer afgang ved døden:

Overlæge Jess Hedeboe, overlæge Espen Berntsen, overlæge Erik Hjalmar Larsen, overlæge Jørgen Reimers.

Ære være deres minde.

Året har været mættet med vigtige opgaver ud over de ”daglige forretninger”: *NOF 2008 Amsterdam, EFORT 2008, 2010, 2011, DOS Strategiplan, Regionsstruktur, Akut Beredskab, DRG systemet, Specialeplanlægning. Der har også været uventede angreb eller bagholdsangreb på vort fag i form af den nye basisuddannelse, regionernes tolkning af akutberedskabet og Dansk Medicinsk Selskabs håndtering af ortopædien. På plussiden må nævnes bestyrelsens succes med at få EFORT 2011 til København.*

DOS ”daglige forretninger” er ganske betydelige og via funktionsbeskrivelser for de enkelte poster i bestyrelsen søges forretningsgangen rationaliseret og vi kan nu igen se bestyrelsens referater på DOS hjemmeside. Som en nyskabelse har DOS via en konsulentaftale kunnet knytte Annette van Hauen til selskabet. Dermed sikres hendes store arbejde med de officielle mødearrangementer specielt i relation til industrien. Bestyrelsen har oplevet en stor opbakning fra medlemmerne og fra fagområderne omkring årsmødet og forårsmøderne, hvor den videnskabelige aktivitet er uformindsket høj trods konkurrence fra EFORT. Temaerne på vore fællesmøder med fagområderne har været domineret af specialeplanlægning, hvor vi utålmodigt har forsøgt at forberede os efter forskrifterne fra Sundhedsstyrelsen. Regionerne kom meget sent på banen i januar 08, og vi har måttet revidere vore planer om fagområdernes repræsentation. DOS status i nyhedsdebatten har som bekendt været præget af vort engagement på privathospitalerne. Vi har delt bekymringerne over faneflugten til privathospitalerne i relation til undervisning og forskning, men medierne har været mere interesseret i synspunkterne vedr. ”guldkalven” ud fra et misundelsessynspunkt. Internt i DOS har A-kursusaktivitetens placering i den private sektor været diskuteret. Vi har valgt at fastholde et krav om hovedansættelse i den offentlige sektor som forudsætning for at kunne fungere som A-kursusleder. Hjemmesiden haft stor glæde af Klaus Hindsø’s funktion som webmaster, og vi ser det som en betydelig udfordring at finde en værdig arvetager efter Klaus, der har valgt nye opgaver efter forårsmødet 08.

Rekruttering af nye læger til ortopædien.

Det videnskabelige input til vore møder er øget gennem de sidste år, der er stigende interesse fra industrien for at deltage, mange læger har vist interesse for uddannelsesudvalgets ”hands on” kurser. Men det er ikke

nok til at sikre tornerosesøvn. Turnusuddannelsen er mod DADL's råd med ét blevet til 12 måneders basisuddannelse uden sikker kontakt til ortopædien. **Vi har dermed mistet vores normale rekrutteringsgrundlag** med et pennestrøg. Fordeling af de resterende læger i basisuddannelsen, hvor man primært fokuserer på almen medicin er overladt til lokale fordelingsudvalg, hvor vi ikke er repræsenteret. Vi arbejder på at forbedre DOS rolle som rekrutterings- og uddannelsesplatform for nye ortopæder, men hvad hjælper det, hvis vi mister skadestuerne og turnuslægerne. Nu skal vi, som vi i nogen grad har gjort det tidligere, satse på forskerrekruttering sidst på lægestudiet. Det vil i endnu højere grad blive nødvendigt at skabe nogle gode ortopædiske forløb på lægestudiet. Vi ser gerne en direkte adgang til hoveduddannelsen efter ph.d. graden. Regionerne har ikke gjort det lettere, idet de forsøger at anvende de 7 lægeroller som vurderingsgrundlag for indgang i speciallægeuddannelsen. Hvordan skal vi få kontakt med de nye læger? Bestyrelsen må understrege at vi finder det vigtigt at fastholde den videnskabelige kvalifikation som en hjørnesten i kvalifikationsgrundlaget for indgang i hoveduddannelsen. Af lignende dimension ser bestyrelsen region MIDT's forsøg på at omgå SST's akutplan med at forvise ortopæder fra akutmodtagelsen som nødvendige modtagelse på level 2 traumecenter. **Vi opfordrer stærkt til at man ser lidt fremad og at vi af uddannelses- og rekrutteringsmæssige årsager alle holder fast i nødvendigheden af at ortopæder er i tilstedeværelsesvagt på de akutte modtagelser.** Vi har opnået tilsagn fra SST om at læger i den sidste del af uddannelsen kan gå ind i en sådan tilstedeværelsesvagt.

Uddannelsesudvalget har gennemført et succesfuld arbejde med Forum for uddannelsesansvarlige overlæger. Støtten til denne rollemodel i uddannelsesarbejdet er blevet meget vigtig og DOS bør værne over Forum for uddannelsesansvarlige overlæger i disse ulvetider. Mange specialselskaber har ikke set dette lys. Det er også i denne sammenhæng vigtigt at samarbejdet mellem DOS bestyrelsen og uddannelsesudvalget fungerer optimalt med en tæt dialog.

DOS Fonden har doneret betydelige beløb til yngre kolleger 2 gange årligt. Det har været nødvendigt at stramme op om de praktiske rammer for uddelingerne. Der er meget stor interesse for disse fondsbevillinger, og der er endnu ikke ro og forståelse omkring bestyrelsens bevillings-

praksis. Man skal møde personligt op ved uddelingen for at kunne modtage en bevilling. Der ydes typisk støtte til anerkendt kursusaktivitet, og mødedeltagelse med videnskabelige bidrag som 1. forfatter, hvilket skal fremgå af ansøgningen. Titel på videnskabeligt bidrag, forfatterrække og antagelsen til præsentation skal fremgå af ansøgningen på bevillingstidspunktet. DOS-fonden vil fra efteråret 08 yderligere donere midler til **DOS fellowships** efter annoncering i Bulletinen og på hjemmesiden.

NOF- 2010 Århus.

På generalforsamlingen i Oslo 2006 valgtes Bjarne Møller-Madsen som ny generalsekretær, og vi fik NOF til Danmark i 2010 med Kjeld Søballe som kongrespræsident. DOS bestyrelsen er i færd med at fastlægge rammerne for samarbejdet, idet vi er enige om at det bliver et fællesmøde mellem NOF og DOS med fælles kommerciel udstilling. sandsynligt i Musikhuset i Aarhus. Søren Overgaard bliver videnskabelig sekretær for kongressen.

NOF 2008 Amsterdam (11. – 13. juni) står for døren. Det tegner til at blive en spændende kongres, og vi opfordrer DOS medlemmerne til at benytte denne lejlighed til at besøge Amsterdam og deltage i det nordiske samarbejde.

Strategiplan:

Bestyrelsens rolle i Selskabet og DOS rolle for medlemmerne, ortopædisk forskning, patienterne, subspecialerne og samfundet har været genstand for diskussion og revurderinger. Tankerne er samlet i en Strategiplan, der lagt ud på DOS hjemmeside. Vi forestiller os en løbende debat med input fra medlemmer, uddannelsesudvalg og specielt fagområderne. Med den stigende subspecialisering har bestyrelsen fundet det nødvendigt at øge samarbejdet med fagområderne og vi har i år haft flere møder med diskussion af specialeplanlægning og DRG takster. I den forbindelse er det vigtigt at fagområderne konstituerer sig stærkt for at kunne klare det betydelige krav, der stilles fra de centrale myndigheder, til tiden. I relation til pressen har vi forsøgt at placere nyheder fra vore videnskabelige møder. Et andet satsområde er **Dansk Medicinsk Selskab**, som er blevet benyttet som rådgiver for SST i lang række forhold uden at vi som Selskab er blevet spurgt. Det har nu medført vi i bestyrelsen har placeret den afgående formand som DOS repræsentant i DMS

for at øge indflydelsen bl.a. ved udpegning af udvalgsmedlemmer. Et aktuelt udvalgsområde er en beskrivelse af **akut medicin som fagområde**. Her har vi peget på Peter Gebuhr som nyt udvalgsmedlem af styregruppen efter Claus Munk Jensens glædelige ansættelse som vicedirektør i Sundhedsstyrelsen og Niels Dieter Röck som medlem af arbejdsgruppen.

Kræftområdet er ligeledes under løbende revision under ledelse af SST med deltagelse af Johnny Keller fra ortopædisk onkologi.

DRG-udvalget:

Dette længst siddende udvalg har gjort et stort stykke arbejde gennem årene. Vi har ofte været frustrerede, når de nye DRG-takster kom og særligt i år, hvor bestyrelsen klagede til medicinaldirektøren over besynderlige takster, trods et grundig forarbejde af DRG udvalget. Vi fik rettet de værste fejl med virkning fra 2008. Undertegnede, næstformanden og Svend Østgaard har deltaget i en ny række møder med formål i at beskrive nogle nye forløbstakster, der efter en politisk beslutning skal være klar i 2009 og med forventet dækning af 80 % af det ortopædiske fagområde. Bestyrelsen finder uændret, at der behov for en betydelig resursetilgang til SST for at denne nye opgave kan løses. Endnu engang en stor tak til Svend Østgaard for hans store hjælp i arbejdet.

Høring vedr. dimensionering af den ortopædiske speciallægeuddannelse 2008-2012

Med den ændrede befolkningssammensætning med hensyn til stigende alder, den ændrede aldersprofil af uddannede ortopæder, der også bliver ældre, har vi peget på en øgning af antallet af ortopædiske kursusstillinger. DOS bestyrelse anbefaler at antallet af uddannelsesstillinger i ortopædisk kirurgi øges fra de nuværende 33 til 40 stillinger per år fra 2008 til 2012 ud fra ovennævnte argumenter med især den øgede frekvens af ældre i befolkningen, det store efterslæb, alderssammensætningen af nuværende ortopædkirurger og ønsket om en maksimeret kompetence hos erhvervsaktive ortopæder. SST har offentliggjort høringssvarene på hjemmesiden <http://www.sst.dk/Uddannelse/Laeger/Prognose.asp?lang=da>. SST har efterfølgende anbefalet en stigningstakt i antallet af uddannelsesstillinger, der er ca. 13 % per år (38 uddannelsesstillinger i 2008). Vi påregner en fornyet henvendelse, da vort høringssvar blev afleveret for sent.

Specialeplanlægning

Den nok største udfordring for DOS som fagligt selskab ligger i SST's store flagskib specialeplanlægning. Der henvises til forrige nummer af DOS Bulletinen. Alle specialer skal gennemgås. Vort papir skal på én gang afspejle vore fagområder og den store tyngde i arbejdet. Dernæst skal vi beskrive faget og dermed også fagområderne ud fra typisk diagnosegrupper for at danne baggrund for en fordeling af arbejdsopgaver i såkaldt hovedfunktion, regionsfunktion, højt specialiseret funktion og udlandsfunktion. Højt specialiseret funktion (< 500 indgreb per år) skal beskrives placeret på ét til 4 behandlingssteder i DANMARK. Vort sidste møde er berammet til 19/8/2008.

Afslutningsvis en stor tak til bestyrelse og uddannelsesudvalg for det gode samarbejde i mine 2 år som formand for Dansk Ortopædisk Selskab.

Cody Bünger

Beretning fra Uddannelsesudvalget

**Dansk Ortopædisk Selskab
Generalforsamlingen d. 08. maj 2008, Aalborg**

Endnu er år er gået med spændende udfordringer for uddannelsesudvalget.

Efter generalforsamlingen i 2007 takkede Micael Haugegård farvel efter næsten et årti i DOS` s tjeneste. Det er et stort savn, men mon ikke Micael stikker næsen frem igen på et tidspunkt. Det må vi da håbe. Ny hovedkursusleder blev Per Wagner fra Vejle, og han har allerede imponeret både uddannelsesudvalget og bestyrelsen med sin store systematik og grundighed.

Ligeledes var det skiftedag på posten som kursistrepræsentant. En sej, bramfri og hårdtarbejdende kvinde blev erstattet med en ditto mand, da Marianne Lind blev byttet ud med Michael Brix.

Vi har i uddannelsesudvalget arbejdet videre med Forum for uddannelsesansvarlige overlæger, da vi er overbeviste om, at denne gruppe kolleger fortsat får behov for et særligt fokus i deres krævende og bestemt ikke altid nemme eller værdsatte arbejde med at forme vores unge kolleger. Mødet i forum i forbindelse med DOS mødet i Aalborg har temaet ”Faglige bedømmelseskriterier for ansættelse i hoveduddannelsesstilling”, da bedømmelserne fremover skal ændres fra pointgivning til en bredere bedømmelse med fokus på flere af lægerrollerne. Bedømmelseskriterierne skal ikke nøjere gennemgås her, da det jo netop er temaet for næste forum. En arbejdsgruppe med professor Søren Overgaard i spidsen har arbejdet med problemstillingen, og Søren har indvilget i at være tovholder på mødet. Så herfra skal lyde en opfordring til at møde op.

En anden undergruppe med deltagelse af bl.a. Thomas Lind fra uddannelsesudvalget har arbejdet med en revision af målbeskrivelsens kompetencekort, da der fra flere sider har været givet udtryk for, at kompetencekortene i deres nuværende form har været tungt håndterbare i den kliniske hverdag, og dette arbejde skal søges integreret i de faglige bedømmelseskriterier.

De specialespecifikke kurser (tidligere A-kurser) kører fortsat opdelt

efter fagområderne, og de udmeldinger vi får, dels fra fagområderne og dels fra kursisterne indikerer, at det er sådan, vi skal fortsætte. Vi oplever nogle meget engagerede og dygtige delkursusledere, som skal have en stor tak for deres indsats. Der har været en del diskussion af delkursusleder funktionen, og reglerne er således, at fagområderne indstiller delkursusledere til uddannelsesudvalget, når et kursus bliver ledigt, typisk efter 3 år. Delkursusledere skal have deres hovedansættelse på et offentligt sygehus, men det diskuteres fortsat, om kursets fysiske placering kan være i et privathospitals lokaliteter. Privathospitalernes indplacering i forhold til uddannelse har været et fokusområde både internt og eksternt, og det er bestemt glædeligt, at flere privathospitaler har tilkendegivet, at de er villige til at deltage i uddannelsen af yngre læger. Der er under Sundhedsstyrelsen nedsat en arbejdsgruppe, som skal klarlægge og dimensionere i hvilket omfang privathospitalerne kan integreres i uddannelsen af yngre læger, en gruppe jeg selv har fornøjelsen af at sidde i.

Work-shop for yngre læger er nu blevet så stor en succes, at vi for første gang også laver work-shop til forårsmødet. Det er en stor fornøjelse, at se de unge kolleger kaste sig over osteosynteser og A-skopier, og ikke mindst at se hvordan de efterfølgende deltager i selve DOS mødet og sågar, for nogens vedkommende, kommer til gallamiddagen, så husk nu – ledende overlæger – at lade de unge komme af sted. Det betaler sig!

Så endnu et år med spændende opgaver er gået i uddannelsesudvalget, og endnu et spændende år ligger forude. Det bliver uden mig, da jeg efter 6 år forlader udvalget. Stor tak for med - og modspil fra de kolleger, som uden betaling bruger en del af deres tid på at arbejde for vores alle sammens Dansk Ortopædisk Selskab.

Marianne Breddam
formand for uddannelsesudvalget

DOS Generalforsamling 2008.

Udvalgsberetning: EFORT

EFORT (European Federation of National Associations of Orthopaedics and Traumatology) holdt i det forgangne år deres 8. Kongres, som var henlagt til Firenze i Italien. Desværre faldt kongressen tidsmæssigt sammen med vores forårsmøde i Århus, og bestyrelsen havde visse bekymringer om det ville påvirke antal deltagere i DOS mødet. Det blev ikke tilfældet, vi havde præcis samme antal deltagere til såvel møderne som gallamiddagen som sidst vi besøgte Århus.

I forbindelse med kongressen i Firenze valgte EFORT ny president med virkning fra årsskiftet 2007/2008. Professor Franz Langlais fra Rennes nåede imidlertid aldrig at fungere som president, idet han på tragisk vis afgik ved døden i forbindelse med en trafikulykke midt i juni måned. Der blev derfor afholdt en ekstraordinær generalforsamling i oktober 2007 i Berlin, hvor professor Karl-Göran Thorngren fra Lund valgtes som føderationens nye president fra 1. januar 2008.

I marts 2007 besluttede DOS's bestyrelse at byde på værtsskabet af EFORT kongressen i 2011. Vi fremviste derfor i foråret 2007 Bella Centeret i København for en delegation fra EFORT, og blev sidenhen valgt på generalforsamlingen i 2007 i Firenze. DOS har valgt Per Kjærsgaard-Andersen som president for kongressen. Vi er stille ved at trække i arbejdstøjet i DOS Bestyrelse der vil udgøre dele af Organisationskomiteen sammen med Søren Overgaard (Scientific Committee Chair) og Klaus Hindsø (Social Event Chair). Med baggrund i kongressen er Per Kjærsgaard-Andersen indvalgt i EFORTS Executive Committee som Co-Opted member for perioden 2007 til 2012.

EFORT lancerede for ca. 2 år siden tanken om at afvikle årlige kongresser. For NOF ville dette kunne medføre en konkurrence mod vores NOF-kongres i de lige år. NOF-landende markerede derfor såvel på skrift som ved generalforsamlingen at man ikke kunne acceptere stor-kongresser hvert år i EFORT regi. EFORT har derfor modificeret sine planer således at der på ulige år afvikles store kongresser, og i lige år kongresser sammen med de nationale forbunds kongresser. I 2008 afvikles EFORT kongressen således sammen med det franske ortopædselskab i Nice, og i 2010 sammen med det spanske selskab i Madrid. Kongressen i 2009 afvikles i Wien. Man er allerede langt fremme med kongressen, der lige-

ledes får danske gæsteforelæsere med bl.a. Kjeld Søballe og Bjarne Møller-Madsen. Kongressen i 2011 i København afvikles i dagene 31. maj til 3. juni. Bestyrelsen har derfor besluttet at vores forårsmøde og generalforsamling i 2011 afvikles ifm EFORT-mødet.

EFORT afvikler årligt 8-10 Instructional Lecture Courses rundt om i Europa. Niveaueet på disse varierer meget, hvorfor der nu vil blive fortaget en mere langsigtet planlægning af kurserne. EFORT koordinerer Visiting og Travelling Fellowships rundt om i Europa. DOS har tilbudt at afvikle et hold **Travelling Fellowships** i Danmark i foråret 2010 i forbindelse med NOF-mødet i Århus. Desuden har en række danske afdelinger tilbudt at tage **Visiting Fellowships** fra de europæiske lande på et 2-4 ugers ophold.

Sammen med UEMS koordinerer EFORT den europæiske Board Examination. Ca 25-30 yngre ortopæder fra hele Europa gennemgår årligt denne. UEMS kan uddybe emnet mere præcist.

Marts 2008
Per Kjærsgaard-Andersen

Valg

Ved DOS Generalforsamling 2008 afholdes valg

Bestyrelse:

Cody Bünger er på valg – kan ikke genvælges

Bestyrelsen indstiller **Benn Duus** til ny næstformand

Der henvises i øvrigt til selskabets vedtægter.

Uddannelsesudvalg:

Formand for Uddannelsesudvalget **Marianne Breddam** er på valg - kan ikke genvælges

Der skal vælges nyt medlem. Uddannelsesudvalget indstiller **Inge Togo** til nyt medlem.

Det nye udvalg vil herefter konstituere sig.

Onsdag den 07. maj 2008

13:00 – 16:00 Lokale A

**Forum for uddannelsesansvarlige
overlæger**

Høring: Faglige bedømmelseskriterier for hoveduddannelsen samt information omkring de fremtidige udvælgelses- og ansættelsesprocesser

Deltagere:

Uddannelsesansvarlige overlæger, ledende overlæger, samt yngre læger med interesse for uddannelsen

Program:

Velkomst:

Uddannelsesudvalget

Introduktion:

Søren Overgaard, formand for arbejdsgruppen

Baggrund for faglige bedømmelseskriterier:

Per Kjærsgaard-Andersen, næstformand DOS

Faglige bedømmelseskriterier:

Søren Overgaard

Fremtidig rolle for Videreuddannelsessekretariatene:

Lisbeth Rasmussen, Videreuddannelsessekretariatet, Region Nord

Onsdag den 07. maj 2008
13:00 – 17:00 Lokale B



Dansk Børneortopædisk
Selskab

Symposium:
"Albuenære frakturer"



Program

Chairman: Bjarne Møller-Madsen

- | | | |
|-------------|---|----------------------------|
| 13.00-13.15 | Anatomi. Epidemiologi | <i>S. Harving</i> |
| 13.15-13.30 | Billeddiagnostik | <i>T. Torfing</i> |
| 13.30-14.10 | Suprakondylær humerus fraktur | <i>N. Wisbech Pedersen</i> |
| 14.10-14.20 | <i>Kaffe</i> | |
| 14.20-14.40 | Medial epikondyl fraktur og albue luksation | <i>K. Hindsø</i> |
| 14.40-15.10 | Lateral og medial kondyl fraktur
Lateral epikondyl fraktur | <i>I. Hvid</i> |
| 15.10-15.30 | Caput radii og collum fraktur
Olecranon fraktur | <i>K. Daubjerg</i> |

- 15.30-15.40 *Kaffe*
- 15.40-16.05 Monteggia fraktur.
Caput radii luksation *B. Møller-Madsen*
- 16.05-16.25 Artroskopi. Post traumatisk stiv albue *J. O. Søjbjerg*
- 16.25-16.55 Cases – interaktiv.
Diskussion. *B. Møller-Madsen, N. W. Pedersen*
- 16.55-17.00 ”Take home message” *B. Møller-Madsen, N. W. Pedersen*

Onsdag den 07. maj 2008

13:00 – 17:30 Lokale C

Workshop for turnus- og introduktionslæger i ortopædkirurgi

På baggrund af de meget fine evalueringer og interessen for workshoppen på sidste års DOS møde har bestyrelsen og Uddannelsesudvalget besluttet at der skal være workshop også ved forårsmødet.

- Indhold:** 2 sideløbende workshops, hver à 2 timer. Der deltages i begge workshops med skift midtvejs.
Begge workshops indledes med et teoretisk oplæg, hvorefter der vil være opstillet arbejdsstationer hvor deltagerne i praksis på modeller kan afprøve principperne.
- Emner:** Knæartroskopi
- oplæg ved: afsløres senere
- **arbejdsstationer leveres af NMS og Smith&Nephew i fællesskab**
Hofte nære frakturer, og intern fiksatión heraf
- oplæg ved: afsløres senere
- **arbejdsstationer leveres fra Synthes.**
- Deltagere:** Målgruppen er kommende ortopædkirurger med kort eller slet ingen operativ erfaring, niveauet vil være tilpasset dette.
Der er plads til 30 deltagere, 2 hold à 15.
Ved overtegning vil introduktionslæger få plads før turnuskandidater. Ved manglende tilmeldinger vil der blive mulighed for deltagelse af stud.med´er.
- Tilmelding:** Til Michael Brix, DOS' Uddannelsesudvalg, på mail michaelbrix@mail.dk **senest d. 1. maj 2008.**
Spørgsmål kan ligeledes stilles på denne mailadresse.
- Betaling:** Kursusgebyr 100.- kr, som indbetales på konto-nr. 9570 3086895
Skriv "Tilmelding til work-shop" og husk navn !!!

Torsdag den 08. maj 2008

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Chairmen: Benny Dahl og Lars Nimb

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Fredag 09. maj 2008

11:30 – 12:00

DOS Honorary Lecture:

Professor John Leong, Hongkong

***”Changing Challenges
in Orthopedics”***

Fredag 09. maj 2008

12:00 – 13:00 Lokale A

Foredrags session: Børneortopædi, Traumatologi, Ortopædkirurgiske infektioner

Chairmen: Bjarne Møller-Madsen og Knud Stenild side

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Fredag 09. maj 2008

12:00 – 13:00 Lokale B

Foredrags session: Overekstremitetskirurgi

Chairmen: Bo Sanderhoff Olsen og Niels Søe

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**”Rygkirurgi – fra pedikelskruer
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Abstracts

GROWTH INSTRUMENTATION IN THE IMMATURE SPINE

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INTRODUCTION The objective of this study is to assess the outcome of growth-preserving operative treatment in immature scoliosis patients, performed from 1994 to 2007.

MATERIAL AND METHODS In the indicated time period a total of 10 scoliosis patients aged 7,4 years (ranging from 3-11)(5 neuromuscular, 3 congenital and 2 juvenile idiopathic) underwent growth-preserving operative treatment. Luque Trolley was used in 5 patients (all with additional mini-invasive convex epiphysiodesis using staples or bone graft), Xia was used in 3 patients, CD was used in one and Synergy was used in one.

The mean follow-up time for all 10 patients was 5.3 years (ranging from 0.5-10.8 years) and the mean pre-OP Cobb angle was 77.3 degrees (ranging from 45-104).

RESULTS Data for instrumented segment growth was complete for 7 patients and showed a mean growth of 0.3 mm/year/growth plate (ranging from -0.6mm to 1.2mm). 3 of these patients had undergone an average of 3 surgical elongations of the instrumentation at a mean interval of 11 months. This isolated group showed a higher instrumented segment growth of 0.7 mm/year/growth plate.

4 Lt-patient's curves progressed and one has not yet been evaluated. 2 Xia patient's curves progressed slightly and one has not yet been evaluated. The Harrington patient's curve progressed slightly and the Synergy patients curve maintained.

Generally complications was related to primary disease and 4 patients had to be re-operated due to instrumentation failure.

CONCLUSION Growth instrumentation is a valid management in selected immature patients with severe scoliotic deformity. Kyphosis is a contraindication. Various techniques have to be applied according to underlying disease.

SURVIVAL AND NEUROLOGICAL IMPROVEMENT AFTER SURGICAL INTERVENTION IN PATIENTS WITH EXTRADURAL OSSEOUS SPINAL METASTASES

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INTRODUCTION In a prospective observational study of Aarhus Spine Center neurological improvement and survival in patients with spinal metastases undergoing spinal surgery was assessed.

MATERIALS AND METHODS 474 patients from 1997 till 2008 with a histologically confirmed diagnosis of spinal metastases and surgical intervention were included. Neurological status pre- and postoperative was evaluated using Frankel-Score. In a subgroup (SG) of 274 patients, survival was measured using Kaplan-Meier-curves.

RESULTS We studied 474 patients in the average age of 61 years (27-87 years), M:F ratio was 6:4. 20,6% suffered from prostata-, 19,6% from breast cancer metastases. Further common primaries were tumours of the lung (11,8%), kidney (8,4%) and myeloma (6,9%). 69% (SG) presented with multiple lesions. More than 20% had unknown primary cancer at admission, 36,4% patients were paralysed (Frankel A-C). 88% (SG) were unable to work or to carry out normal activities of daily living. According to Aarhus Algorithm, 63% (SG) underwent posterior decompression and instrumentation. After operation 15,5% were still paralysed (Frankel A-C, preop: 36,4%). 38,7% reached Frankel D (preop: 36,3%) and 36,7% Frankel E (preop: 23,4%). Postoperative 45% (SG) were free of pain. 28% (SG) of the patients survived 6 months postoperative, 16% (SG) 12 months and 6% (SG) 24 months, mean survival were 224 days (SG). Related to primary tumour (SG), patients with prostate-cancer survived 186 median days, breast-c 534, lung-c 89, kidney 237 and cancer coli 173 median days.

CONCLUSIONS Presented data show, that the primary tumour displays a strong impact on the days of median survival. Surgical intervention in patients with spinal metastatic tumour results in a remarkable bettering of the neurological function and thus quality of life.

FUNCTIONAL OUTCOME AFTER LUMBAR SPINAL FUSION IN ELDERLY PATIENTS. A COMPARISON OF INSTRUMENTED AND NON-INSTRUMENTED FUSION IN PATIENTS AGED 60 YEARS OR OLDER.

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INTRODUCTION Instrumented fusion in older patients is often avoided due to risk of screw loosening. Fusion potential in older patients is however reduced and they might have an increased need for immediate stabilisation.

AIM To investigate functional outcome after lumbar spinal fusion in older patients comparing instrumented and non-instrumented fusion.

MATERIALS AND METHODS 93 patients (M/F:34/59), mean age 69.6 years (range 60-88), operated between 2001 and 2005 with posterolateral fusion using allograft. 50 had an uninstrumented fusion, 43 an instrumented fusion. They were followed prospectively for two years. Outcome measures were Dallas Pain Questionnaire and NRS for back and leg pain.

RESULTS Instrumented patients were younger: 67 years (range 60-81) vs 72 years (range 60-88) ($p=0.0001$), demanded longer operation time: 221 min vs 162 min ($p=0.0003$), had higher blood loss 918 ml vs 641 ml (NS). Hospitalisation time was average 13 days in both groups. Within the two-year FU 5 patients in each group required re-operation (NS). Fusion rate at 1 year was 67% in the non-instrumented group vs 87% in the instrumented group ($p=0.034$). The instrumented patients had better activity based DPQ-scores at both 1 and 2 year FU ($p<0.04$ except daily activity 1 year FU $p=0.0878$). Back pain was less in the instrumented group at both 1 year FU (2.9 vs 4.2, $p=0.0396$) and 2 year FU (2.8 vs 5.0, $p=0.0155$), the same was true for leg pain 1 year FU (2.6 vs 4.2, $p=0.013$) and 2 year FU (2.7 vs 4.6, $p=0.0981$)

DISCUSSION This study shows a significant better outcome of instrumented fusion compared to non-instrumented fusion in patients older than 60 years. Number of re-operations within the first 2 years was comparable. Results could be biased by surgeon selection, but in selected patients instrumented fusion in this age group produces very good results.

MINIMALLY INVASIVE TECHNIQUE REDUCES MUSCLE DAMAGE IN LUMBAR FUSION SURGERY. A CASE CONTROL STUDY USING MICRODIALYSIS

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INTRODUCTION Stripping of the paraspinal muscle is associated with persistent back pain and postoperative dysfunction. There might be less damage with minimally invasive technique. We used microdialysis (MD) to evaluate glycerol concentration difference (GCD) between the paraspinal muscle and deltoid muscle during lumbar fusion surgery using either minimally invasive or conventional open technique. Our previous study showed that GCD represents the damage extent of paraspinal muscle during lumbar fusion surgery.

MATERIAL AND METHODS Open instrumented posterolateral fixation plus transforaminal interbody fixation were performed in ten patients (PT group) and percutaneous pedicle screw fixation plus anterior interbody fixation in eight patients (PA group). MD catheters were placed both in the paraspinal muscle and deltoid muscle as control. Glycerol concentrations were measured every 20 minutes during surgery and every 1 hour postoperatively for 3 hours.

RESULTS The GCD mean peak level in PA group and PT group was $140 \pm 71 \mu\text{M}$ and $674 \pm 387 \mu\text{M}$ ($P = 0.002$). The relative time to reach GCD peak level was at 24% and 80% of the whole surgical procedure, PA and PT respectively ($P = 0.000$). During surgery there was significant difference between the area under the GCD curves of the two groups, $45 \mu\text{M}$ and $386 \mu\text{M}$, PA and PT respectively ($P = 0.002$). The GCD level in PA group came back to 0 at the first hour postoperatively ($P=0.2240$) and kept constant throughout the 3-hour postoperative period. In the PT group, GCD level decreased postoperatively ($P=0.0004$), but did not back to 0 by the third hour postoperatively, with mean level $93 \pm 30 \mu\text{M}$.

CONCLUSION Our results demonstrate less damage to the paraspinal muscle using minimal invasive technique in lumbar fusion surgery. The muscle tissue recovered faster compared to open technique.

INTERCHANGEABILITY OF THE EQ-5D AND THE SF-6D IN CHRONIC LOW BACK PAIN

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/ Ortopædkirurgien Region Nord

INTRODUCTION Health-related quality of life (HRQoL) is becoming one of the foremost outcome parameters for the evaluation of current and emerging orthopaedic technologies. It's success, at least partly, relates to HRQoL being a generic measure allowing for comparison across diseases and interventions. There are alternative instruments for the assessment of HRQoL and a key assumption, for evaluation practice to inform decision-making, is that alternative instruments provide like estimates. The objective of this study was to investigate the interchangeability of two of the most common instruments, the EQ-5D and the SF-6D, in individuals with low back pain.

MATERIAL AND METHODS A cross sectional study was conducted across 275 patients 5-9 years after their first spinal fusion on indication of long-lasting low back pain. The EQ-5D and the SF-6D were mailed to respondents for self-completion. Statistical analysis of inter- and intra-measure agreement was based on Bland and Altman's limits of agreement.

RESULTS The mean difference was limited to 0.085 (SD 0.241) but it masked more severe bidirectional variation. The expected variation between future observations of EQ-5D and SF-6D was estimated at 0.546 (HRQoL scales, in principle, range from 0 to 1). The intra-measure variation of the EQ-5D, using alternative (country-specific) scoring sets, ranged from 0.096 to 0.356.

CONCLUSION Although the EQ-5D and the SF-6D have each been found psychometrically valid for outcome assessment in low back pain they cannot be used interchangeably for measurement of HRQoL. In lack of a gold standard, the recommendation for researchers in low back pain is to choose either measure but, at the same time, discuss the impact of the counterfactual and exert caution when comparing results to those of others.

EARLY CLINICAL RESULTS OF A NOVEL POSTERIOR DYNAMIC STABILIZATION SYSTEM FOR DEGENERATIVE LUMBAR SPINAL DISORDERS

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INTRODUCTION: Pedicle screw based dynamic stabilization systems aim to address the fusion associated problems.

The aim of the study was to analyze the early clinical outcomes of the initial 70 patients treated with the a novel pedicle screw/rod based dynamic stabilization system (N Fix II).

METHODS: The first 70 consecutive patients who underwent lumbar dynamic stabilization with the N Fix II system at seven centers were retrospectively reviewed. The primary indications for surgery were deg. spondylolisthesis (13), adjacent segment disease(9), deg. lumbar scoliosis (2), spinal stenosis (15), herniated disc (11) and deg. disc disease (20). Patients were evaluated pre-operatively and at 6, 9 and 12 months postoperatively. Primary clinical outcome measures were VAS and ODI scores. Preliminary radiographic outcome measures were presence or absence of implant failure or loosening.

RESULTS: Seventy patients (29 male & 41 female, mean age 53.2 years) were entered. Mean follow-up was 7.2 months (range 6-12 months). Mean VAS scores improved from 8.0 preoperatively to 3.6 postoperatively ($p<0.0001$), and mean ODI scores improved from 45.3 preoperatively to 23.1 postoperatively ($p<0.0001$). The number of patients with severe disability ($ODI>40$) was 48 (69%) pre-operatively and decreased to 6 patients (10%) postoperatively ($p<0.0001$). No screw loosening or rod breakage was observed in any of the 70 patients in this study.

CONCLUSION: Dynamic stabilization with the N Fix II system produces significant improvements in pain and function without apparent risk of implant failure at short term follow-up. The small number of patients with severe disability at follow-up compares favorably to long term published data on posterolateral fusion.

REHABILITATION AFTER FAST-TRACK KNEE ARTHROPLASTY

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INTRODUCTION Fast-track knee arthroplasty has resulted in improved postoperative pain-management and reduced length of hospital stay, but little is known about rehabilitation and the level of postoperative pain after discharge.

MATERIAL AND METHODS 50 consecutive patients undergoing fast-track total knee arthroplasty with local infiltration analgesia were instructed in formal self-assessment of pain at rest and upon mobilization on a Visual Analogue Scale 0-100 mm (VAS), level of nausea (Verbal Rating Scale 0-4) and use of opioids 1-10 and 30 days postoperatively. Length of hospital stay was recorded.

RESULTS Pain at rest increased on the first postoperative day (POD) compared with preoperative pain (median 40 mm vs. 24 mm) but returned to the preoperative level on POD 2-10 (range 20 – 28 mm) as well as POD 30 (22 mm).

Compared with the preoperative pain level (median 61 mm), pain upon mobilization decreased from POD 1 (58 mm) to POD 10 (30 mm) as well as on POD 30 (40 mm).

On POD 5, the proportion of patients with pain \geq 50 mm was 18% at rest and 32% upon mobilization.

The use of oxycodon was low (mean 13,7 mg on POD 1, 8,5 mg POD 10 and 4,3 mg POD 30).

Moderate to severe nausea was observed in less than 10 % of cases throughout the study period.

Length of hospital stay was (mean) 2.7 days.

CONCLUSION Fast-track knee arthroplasty with early discharge results in acceptable levels of pain and nausea with concomitant low use of opioids after discharge. A subgroup of patients may require further attention with need for improved pain management after discharge.

LOCAL ANESTHETICS AFTER TOTAL KNEE ARTHROPLASTY: INTRA- VS. EXTRAARTICULAR ADMINISTRATION? A RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED STUDY

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Background: High-volume local infiltration analgesia, with additional intra-articular and wound administration of local anesthetic has been shown to be effective after knee replacement, but the optimal site for administration of the local anesthetic has not been evaluated (i.e. intra-articular vs. extra-articular).

Material and Methods: 32 patients undergoing total knee replacement with high-volume ropivacaine infiltration analgesia were randomized to receive injection with 20 ml ropivacaine 0.2% intra-articularly plus at least 15 ml saline in the extraarticular wound space vs. 20 ml ropivacaine 0.2% intra-articularly plus at least 15 ml ropivacaine 0.2% in the extraarticular wound space 24 hours postoperatively, and pain intensity at rest and mobilisation was recorded for the following 4 hours.

Results: Pain intensity at rest, during flexion or straight leg lift was not statistically different between the two groups, but with a tendency to improved analgesia with administration of additional local anesthetic in the extra-articular wound space.

Conclusion: The insignificant analgesic effect by additional administration of extra-articular local anaesthetic may be due to the relatively low pain scores observed 24 hours postoperatively, confirming the efficiency of the high-volume infiltration analgesia technique. However, future studies are required to define the optimal site for administration of local anesthetic following knee replacement surgery.

HIGH-VOLUME INFILTRATION ANALGESIA IN TOTAL KNEE ARTHROPLASTY - A RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED TRIAL.

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Background: High-volume infiltration analgesia may be effective with low risk of side-effects in hip and knee arthroplasty.

Material and Methods: In a randomized, double-blind, placebo-controlled trial in 12 patients undergoing bilateral knee arthroplasty, saline or high-volume (200 ml) ropivacaine 0.2% with epinephrine was administered intraoperatively along with supplemental postoperative injections via an intraarticular catheter. Pain was assessed for 48 hours in a fast-track setting.

Results: Pain at rest and movement was significantly reduced for up to 32 hours with the high-volume infiltration technique. Mean vs. median hospital stay was 6.3 vs. 5 days.

Conclusion: High-volume infiltration analgesia is effective in knee arthroplasty. The technique is simple and has an apparent lower potential for side-effects compared with other analgesic techniques in knee arthroplasty. References: 1. Rostlund, T.; Kehlet, H. High-dose local infiltration analgesia after hip and knee replacement - what is it, why does it work, and what are the future challenges? *Acta Orthop.* 2007; 78: 159-61

MOBILIZATION AND POSTOPERATIVE PAIN TREATMENT IN OXFORD UNICOMPARTMENTAL KNEE ARTHROPLASTY

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INTRODUCTION Though unicompartmental knee arthroplasty allows for small incisions and minimal soft tissue damage it is followed by pain. Our goal was to compare 3 means of anaesthetics in order to determine which one lead to least pain and fastest recovery.

MATERIAL AND METHODS 45 patients were randomized into 3 groups. Pain treatment was epidural catheter, intra-articular catheter plus local infiltration analgesia or local infiltration analgesia only. In the epidural catheter was given Ropivacain 2 mg/ml + Sufentanil 1 µg/ml – flowrate 4-8 ml/hour. In the intra-articular catheter was given Marcain 2% with adrenalin – flowrate 1 ml/hour for 24 hours postoperatively. Local infiltration analgesia was a mixture of 40 ml of Marcain 2% with 30 mg Toradol – given in ligaments, capsular structure and in the soft tissue.

In all patients postoperative pain was measured (VAS). Additional use of pain medication was converted to equianalgetic doses of morphine for comparison.

RESULTS Mobilization more than 2 hours was on the first day 93% for the patients given only local infiltration analgesia versus 63% of the patients with epidural and 77% of the patients with intra-articular catheter. We found that the additional use of pain medication in the patients with intra-articular catheter was about 33% higher than in the other groups. The average postoperative hospitalization was 3 days for patients with infiltration only and 4 days for the two other groups.

CONCLUSION In this study the use of local infiltration analgesia after unicompartmental arthroplasty gave faster mobilization and less postoperative pain than use of additional intra articular analgesia or epidural analgesia.

COMPRESSION BANDAGE PROLONGS DURATION OF LOCAL INFILTRATION ANALGESIA IN TOTAL KNEE ARTHROPLASTY.

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Introduction: High-volume local infiltration analgesia (LIA) has been demonstrated to be effective after knee replacement¹, and the technique has several important components. Apart from the drug mixture (local anesthetic/NSAID/epinephrine) and the injection technique, which should be systematic and comprise all tissues involved in surgery, the use of a compression bandage is assumed to prolong the analgesic effect. However, the role of compression bandage has not been evaluated.

Material and Methods: 48 patients undergoing total knee replacement with high-volume (200 ml) 0.2% ropivacaine with epinephrine (1:1000) were randomized to a compression vs. non-compression bandage and pain was assessed at rest and during mobilization at regular intervals for 24 hours postoperatively.

Results: Pain at rest, during flexion and leg lift was significantly lower with compression vs. non-compression bandage and with concomitant lower use of oxycodone. Mean hospital stay was similar (2.8 days vs. 3.3 days; $p>0.05$).

Conclusion: A compression bandage is recommended to prolong analgesia after high-dose local infiltration analgesia in total knee arthroplasty. A multidisciplinary approach including anesthetic as well as surgical techniques may lead to improved postoperative pain management.

References

1. Röstlund T, Kehlet H. High-dose local infiltration analgesia after hip and knee replacement - what is it, why does it work, and what are the future challenges? *Acta Orthop* 2007;78:159-161.

THE ROLE OF PAIN FOR EARLY REHABILITATION IN FAST TRACK TOTAL KNEE ARTHROPLASTY. A DESCRIPTIVE STUDY OF 100 PATIENTS

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INTRODUCTION Pain after total knee arthroplasty (TKA) is considered to be the most important limiting factor for early intensive functional recovery. We investigated the relationship between early functional mobility and pain intensity in a well-defined fast-track program after TKA.

MATERIAL AND METHODS: One hundred consecutive TKA patients were operated in spinal anesthesia supplemented with local anaesthetic wound injections, and followed a clinical pathway including transfer and ambulation from day one with further daily physical therapy. Patients were assessed on postoperative day 1 (POD 1), on postoperative day 2 (POD 2) and on the day of discharge (DOD). Independence in 3 basic functions of transfer and ambulation, pain intensity using Verbal Analog Scale (VAS), range of knee motion (ROM), functional mobility evaluated by the "Timed Up & Go" test (TUG), walking distance and length of stay (LOS) were recorded with well-defined discharge criteria.

RESULTS: On POD 1: 90% of the patients were able to walk independently with median VAS score ≤ 5 , and 78% of these patients walked > 70 meters. On POD 2: All patients walked independently, median VAS score ≤ 4 and 96% of the patients walked > 70 meters. Median LOS: 3 days. On DOD all patients walked with crutches, median VAS score ≤ 3 , walking distance > 70 meters, and median TUG test time 19.2 sec. A relationship between functional mobility and pain ($p < 0.05$) was only observed on POD 1.

CONCLUSION: Pain has a limited influence on the functional recovery beyond the first postoperative day after TKA.

TOTAL HIP REPLACEMENT USING A DIAPHYSIAL SUPPORTED LONG STEM AS SALVAGE PROCEDURE FOR FAILED INTERNAL FIXATION OF INTERTROCHANTERIC FEMORAL FRACTURE

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INTRODUCTION Despite the large volume of intertrochanteric femur fractures treated with internal fixation yearly, failure is rare. Several salvage procedures has been described with varying outcomes. Since 2003 these patients have been treated at Kolding Hospital with total hip replacement using diaphysial supported long stems.

MATERIAL AND METHODS From 2003 to 2006, 21 patients (median age 78 years) were treated for failed internal fixation of intertrochanteric femoral fracture. All internal fixations were made with dynamic hip screws (DHS®, Synthes) and salvaged with total hip replacements using diaphysial supported long stems (ZMR®, Zimmer) and various cups. We recorded the functional outcome, pain and radiological results after three and at least 12 months.

RESULTS No peri- or postoperative complications were recorded. Median hospital stay was nine days (2-27). Median operating time was 83 minutes (60 – 140). All were ambulatory at discharging. One was not available for follow up. Mean follow up was 18 months (1 - 60). At three months 18 were available for follow up. One had pain which influenced gait. 17 were well mobilised and did not experience significant pain. Radiograms at three months were all satisfying.

At twelve months 16 were available for follow up, one had pain from a loose stem and one experienced fracture below the stem. Fourteen had good or excellent clinical result. One were not available for radiographic follow up, leaving 15, two with the above mentioned failures (1 loose, 1 fracture) and 13 with good radiographic result.

CONCLUSION Total hip replacement using diaphysial supported long stems is a good salvage procedure for failed internal fixation of intertrochanteric femoral fracture, concerning peri/postoperative complications, length of hospital stay, functional outcome, pain and radiographic results.

TWO STAGE REVISION OF THE INFECTED TOTAL HIP REPLACEMENT (THA) WITH UNCEMENTED COMPONENTS

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Introduction: Revision of the components in the infected THA can be difficult due to extensive bone resorption and difficulties in eradicating the infection. Femoral defects can be solved by bonegrafting or stems with distal fixation and acetabular defects by the use of bone grafting and uncemented cups in most cases. Results after staged revision using uncemented components are reported.

Material and methods: All patients were infected according to Hsieh et al. (1). 31 cases were included. During stem revision different components were used. All cups used were uncemented and screw fixated. Surgery was performed from October 1996 to December, 2005. Number of surgeons was 2. Median age of the patients was 68 (60,72) years. Median follow-up was 34(13,57) months. 11 women and 20 men were operated. During stage one culture was positive in 20 of the cases, while a fistula was observed in 7 cases. Loosening of the cup was observed in 10 cases while loosening of the stem was observed in 11 cases.

Results: Only one patient was re-revised due to recurrence of the infection. Another was reoperated because of a fracture below the stem. The overall survival rate was 94% and the survival rate for recurrence of infection was 97%. Two of the cultures obtained during the second stage operation were positive. None of these were re-revised. Median Harris Hip Score increased markedly.

Conclusion: Two stage revision of the infected hip using uncemented components was in the present study satisfactory.

References:

1. Hsieh et al. JBJS 2004, 86A(9):1989-1997

BILATERAL TOTAL HIP ARTHROPLASTY IN ONE-OR TWO-STAGE PROCEDURE WITH UNCEMENTED ANATOMIC STEM

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Per Kjærsgaard-Andersen*
Ortopædkirurgisk afdeling, Vejle Sygehus

INTRODUCTION Bilateral one-stage THA is a more frequent procedure than two-stage THA despite the fact that the literature does not show a clear advantage of one-stage THA compared with two-stage THA. The main aim of the study was to compare one- and two-stage bilateral THA focusing on cost-effectiveness, complications, pain level and day of mobilization.

MATERIAL AND METHODS We retrospectively compared 26 patients (52 hips) undergoing one-stage bilateral THA with 22 patients (44 hips) undergoing two-stage bilateral THA on Vejle Sygehus from 2004-2007.

RESULTS Apart from an 8-year age difference ($p < 0,0001$) we found the two groups comparable in regards to ASA-score, BMI and smoke habits. We found no statistically significant difference between the two groups in operating time, anesthetic time, blood loss, complications and hospital stay. We did find a statistically significant difference between the day of mobilization ($p < 0,0001$) with the majority of the one-stage patients being mobilized on the day after surgery while the majority of the two-stage patients being mobilized on the day of surgery. We found that the active pain level was higher prior to surgery than after surgery for both groups. In general the pain level was highest in the one-stage group.

CONCLUSION We found no difference in cost-effectiveness between the two groups based on a non-economical approach including operating time, anesthetic time and the complication frequency. Future studies may focus on possible savings on parameters that cannot be measured during the hospital stay such as rehabilitation time and how fast the patients can return to labour. Even though we found a statistically significant higher pain level in the one-stage group the results ought to be confirmed in a study where the patients receive the same peri- and post-operative pain management.

FIVE YEARS FOLLOW UP OF ACETABULAR CUP (SATURN, AMPLITUDE) IN PATIENTS WITH PRIMARY TOTAL HIP ARTHROPLASTY

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INTRODUCTION Total hip arthroplasty improves quality of life of operated patients. Due to the increasing rate of post-operative dislocation especially in patients older than 70 years, The Saturn Amplitude cup, which is an uncemented, non-constrained double-mobility cup with a high total R.O.M was introduced in our department. The purpose of this study is to evaluate the primary Saturn cup hip prostheses 5 years or more after primary operation.

MATERIAL AND METHODS From May 2000 to October 2002, 113 patients were operated with primary Saturn cup, at the time of the follow up 49 were died, their records were reviewed, two were re-operated after THA treating superficial infection, and one because of fracture around femur prostheses(the Saturn cup was not revised in those 3 patients).15 patients did not show up at the follow up.

Clinical and radiographic analyses of 52 hip prostheses in 49 patients were preformed. The mean of the follow up was 77 months. The main indication for THA was arthrosis in 35 hips, femoral neck fractures in 11 hips, 7 of them treated primary with internal fixation, caput necrosis in 3 hips, RA in 2 hips, and dysplasia in 1 hip.

RESULTS Neither post operative dislocations, nor loosening were registered at the time of the follow up. Only one was revised because of fracture around the femur prostheses, the Saturn cup was not revised. One had superficial infection, which was treated with antibiotics. Radiologically there were no signs of loosening or osteolysis.45 patients were satisfied with the results of the operation. The mean Harris Score at the time of the follow up was 84.

CONCLUSION Saturn cup has a good survival rate at the 5 years follow up, there was no dislocation, revision or loosening of the cup, most of the patients were very satisfied with the results.

HIP JOINT OSTEOARTHRITIS IN LEGG-CALVÉ-PERTHES DISEASE – A LONG TIME FOLLOW-UP CASE-CONTROL STUDY

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INTRODUCTION The purposes of this study are to investigate the inter-relationship between Stulberg class and radiographic hip osteoarthritis (OA) in patients with Legg-Calvé-Perthes (LCP) disease and to determine whether LCP patients develop hip OA more commonly than sex- and age-matched persons.

MATERIAL AND METHODS From 1941 to 1962, 167 patients with LCP disease presented to The Community of Disabled in Kolding, Denmark. All hips included were treated conservatively by a Thomas splint. Retrospectively medical records and radiographs of the patients were retrieved.

At follow-up weight-bearing AP pelvis radiographs were obtained. OA was present when the minimum joint space width was <2.0 mm. Radiographs of sex- and age-matched controls were obtained from The Copenhagen City Heart Study.

The following criteria for exclusion were applied: 1) radiographs insufficient or missing making it impossible to perform a Stulberg classification, 2) patients who did not want to participate, 3) emigrated persons, 4) persons lost to follow-up, 5) patients with previous surgery to pelvis or lower limbs and 6) dead persons. 52 patients (55 hips) were enrolled in the study and 115 patients (136 hips) were excluded. Mean age for men at follow-up was 53 years and for women 55 years.

RESULTS LCP patients have a significant higher risk of having hip OA compared to a sex- and age-matched control group, $p=0.04$ [OR=8.5 (CI=0.8-428.8)]. Patients in Stulberg class III, IV or V have a significantly increases risk of hip OA compared to patients in Stulberg class I or II, $p=0.03$ [OR=13.7 (CI 1.9-97.1)].

CONCLUSION LCP patients have a significant increased risk of having hip OA compared to a sex- and age-matched control group. Patients in Stulberg class III, IV and V have a significant higher risk of having hip OA than patients in Stulberg class I and II.

PE WEAR ANALYSIS IN CLINICAL STUDIES. SHOULD WE USE FEW OR MULTIPLE RADIOGRAPHS?

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INTRODUCTION The extent of wear polyethylene (PE) in clinical series varies greatly even for the same type of implants. Several factors can influence wear measurements for instance, the method of wear (manual or digital), intra-observer variance, and the quality of radiographs. Some researchers analyse several sequential radiographs while others only analyse the latest follow-up radiograph. Few evaluate the accuracy of their own investigations.

MATERIAL AND METHODS Two-dimensional femoral head penetration into the PE liner of eleven patients from a clinical series with twelve-year follow-up was measured (PolyWare 5.10 Digital Version). Six AP radiographs were available per patient. Screw-fixed Universal Hexloc Cup (Biomet), UHMWPE liner, and 28mm cr-co femoral head was used. Three analysis approaches were used: Method A: analysis of all six follow-ups adding the sequential wear between follow-ups. Method B: analysis of the post-operative versus the final twelve-year follow-up. Method C: analysis of only the twelve-year follow-up assuming zero wear at the time of operation. Students t-test and F-test was used (95% level).

RESULTS The mean linear wear with method A (4.26 mm, SD 1.24) was significantly different compared to method B (2.45 mm, SD 1.11) ($p=0.000$) and method C (3.26 mm, SD 0.94) ($p=0.01$). The linear wear of method B was not significantly different ($p=0.06$) from that of method C. The variances was not significantly different ($p=0.3$).

CONCLUSION The number of radiographs used for wear analysis has a significant influence on the result. Comparing wear in studies of hip arthroplasty, at least using PolyWare, does not make sense unless the same number of radiographs is used. It is unknown which number of radiographs results in the best estimate of the true wear rate. Further studies should focus on this matter.

NO INCREASE IN THE RATE OF COMPLICATIONS AFTER TOTAL HIP REPLACEMENT WITH A 4 DAYS HOSPITALIZATION TIME

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INTRODUCTION: The purpose of this study was to investigate if a decrease in hospitalization time after THR to 4 days (3 nights) increased the rate of complications.

MATERIAL AND METHODS: Data were collected retrospectively through examination of medical records of 140 consecutive patients undergoing primary hip athroplasty in Hørsholm Hospital in a three months period from August through October 2006. The data were collected pre-, per- and postoperatively, and after 3 months follow-up with special emphasis on the complications. Data obtained from the patient administrative system GS-Open were compared to data from a prospective study of cardiovascular complications, the ESMOS-study, which was carried out before the implementation of the accelerated hospital stay in the period from 2004 until May 2005. The total population was 510 patients.

RESULTS: The median length of stay was reduced from 7 to 4 days. The incidence cardiopulmonary complications showed a non-significant fall of 0.9 %. The incidence of urinary tract infections decreased from 9.2 % to 5.7 %, possibly because the use of urinary tract catheterization was minimized. In the prosthesis related complications, which included dislocations, fracture, re-operation, deep infection, peroneal palsy and critical haematoma, there was a non-significant fall of 4.8 %. In the same period the number of surgeons was reduced, and the operation time increased by average 5 min. to 65 min. Furthermore the study showed no increased risk of getting a complication after discharge.

CONCLUSION: Shortening of the hospital stay after THR to 4 days did not lead to more postoperative complications. On the contrary an insignificant fall in the complication rate was seen, but this was probably caused by other factors than the hospitalization time.

QUALITY OF LIFE AFTER TOTAL HIPARTHROPLASTY – THE EFFECT OF CO-MORBIDITY AND COMPLICATIONS

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INTRODUCTION: SF-36 has been used to evaluate the effect of total hip arthroplasty (THA) on the patient's quality of life (QoL). There is though a lack of data describing how QoL is affected if the patients have medical co-morbidities or if they suffer postoperative complications.

MATERIAL AND METHODS: 500 consecutive THA patients were followed prospectively for one year, with the purpose to collect all surgical and thromboembolic events. SF-36 forms were filled in the day before and one year after the operation. 397 (79.4%) of the patients had two forms sufficient for further data analysis. Co-morbidity data was measured pre-operatively. Complications were measured with structured interviews telephone interviews after 3 and 12 month. All reported events were verified according to predefined criteria in the patient's medical journal.

RESULTS: The majority of patients experienced a gain in quality of life one year after THA. The co-morbid patients had a significantly lower QoL score in all scales, but they still gained from the operation. Patients that experienced either a surgical or a thromboembolic complication had lower SF-36 score one year post-operatively compared to patients without complications. Subgroup analysis revealed that patients with deep infection, aseptic loosening or re-operation had a fall in QoL compared to the pre-operative value and scored significantly worse than all other patient groups.

CONCLUSION: THA is a successful operation when QoL is measured one year postoperatively. Patients with preoperative co-morbidity have to be aware that the THA operation does only solve their hip problems. The small but important group of patients with deep infection, aseptic loosening and malfunction re-operation, were the only to loose QoL one year after THA in this study.

OVERALL COMPLICATION RATE IN 500 CONSECUTIVE TOTAL HIP ARTHROPLASTY PATIENTS

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INTRODUCTION: Limited data exist in the literature on the overall risk of complications after total hip arthroplasty (THA).

MATERIAL AND METHODS: A prospective cohort study of 500 consecutive THA operations was carried out in Frederiksborg County, Denmark from January 2004 to May 2005 (both primary and revision THA). Complications were assessed by structured telephone interviews 12 months after THA and verified in hospital files or by general practitioners.

RESULTS: 498 patients were followed for one year or until death. 33 patients (6.6%) experienced thromboembolic complications (thromboembolic death, pulmonary embolism, deep vein thrombosis, stroke, transient ischemic attack or retinal vein occlusion). 59 (11.8%) sustained surgical complications (deep infection, fracture, dislocation, peroneal palsy, bleeding, aseptic loosening or re-operation). The overall complication rate was 17.5%. Idiopathic osteoarthritis THA had significantly lower overall complication-rate (13.0%) than secondary osteoarthritis/revision THA (28.6%)($P < 0.001$).

CONCLUSION: Continuous registration and focus on complications is important in this large patient group. Since the number of days in hospital is declining these years it is important to ensure that these patients can get diagnosed and treated by specialist after discharge if suspicion of complication appears. Patients and surgeons should include information about the overall complication rates when planning a THA.

ANTERIOR SUPINE INTER MUSCULAR APPROACH TO THA

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INTRODUCTION We have in an international group of surgeons developed a minimal invasive anterior approach to THA in order, to minimize the surgical trauma and speed up recovery from the surgical procedure.

MATERIAL AND METHODS Access to the hip is obtained through a true inter muscular, inter nervous plane between Musculus Sartorius and Musculus Tensor Facia Latae. Access to the acetabulum is straight forward. Access to the femur is preceded by capsular release in order to be able to lift up the femur for straight reaming of the femoral shaft. The first 16 patients, (7 women and 9 men, mean age 58 years) with 19 THA (3 bilateral) were followed for mean 20 month and compared with the following 16 patients (9 women an 7 men, mean age 55 years) with 18 THA (2 bilateral) followed mean 11 month, in order to describe the learning curve.

RESULTS Mean operating time declined from 71 minutes to 60 minutes and bleeding during operation declined from 620 ml to 350 ml. A modified Harris Hip score excluding range of movement was obtained by telephone interviews. The score for the first group of 97,3% and for the second group 95,7%. In the first group 4 complications were observed: One femoral revision in a severe osteoporotic patient, one partial fracture of the trochanter major, one dislocation and one palsy of the lateral coetaneous nerve of the thigh. In the second group we had 2 complications. One patient with thigh pain and one cup revision due to failure of a press fit cup.

CONCLUSION With the anterior approach the learning curve seems to be acceptable with consistently good results as evaluated by a modified Harris Hip score and an acceptable rate of complications. The effect of anterior approach to THA on rehabilitation is being investigated in a multicenter study.

SPONTANEOUS TRANSFORMATION OF CULTURED PORCINE BONE MARROW STROMAL CELLS

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INTRODUCTION Recently, the possibility that tumors originate from cancer stem cells (CSCs) has been proposed. Stem cells and CSCs share certain features such as self-renewal and differentiation potential. The aim of this study was to evaluate whether bone marrow stromal cells (BMSC) after long-term culture are transformed into malignant cells.

MATERIAL AND METHODS BMSC from 6 pigs were isolated and propagated continuously. Cell morphology was observed. Transformation properties were evaluated by means of serum dependence assay, Ki-67 immunostaining, soft agar colony assay, karyotyping, telomerase activity detection assay and analysis of the expression of p53, Fas and c-Myc genes. Multipotency was investigated by biochemical and histological assays and analysis of gene expression.

RESULTS BMSC showed a change in appearance, from the initial spindle shape to a more flatted morphology then to small contact shape. After additional passages, BMSC gradually acquired recovery of proliferating capacity and transformation properties such as anchorage-independent growth, chromosomal abnormality, and abnormal gene expression. The expression of P53 and Fas was decreased, while the expression of c-Myc gene was increased and TGF β signaling pathway was upregulated. However, telomerase activity maintained negative during culture.

CONCLUSION Porcine BMSC can undergo spontaneous transformation, which provides a useful model to study the mechanisms associated with the tumorigenic potential of adult stem cells.

MICROSTRUCTURAL TRABECULAR FORMATION IN AN ALIF MODEL WITH EQUINE BONE PROTEIN EXTRACT, RHBMP-2 AND AUTOGRAFT

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INTRODUCTION In the search of bone graft alternatives, several growth- and differentiation factors is being investigated for spinal fusion procedures. There is a wide range of products varying from single factors such as rhBMP-2 and lyophilized bone material containing several different factors, products like COLLOSS E. Even though they are widely used, several principal mechanisms of new bone formation using these bone graft substitutes remain unknown.

MATERIAL AND METHODS An anterior lumbar interbody fusion (ALIF) was performed on 11 Danish female landrace pigs. Three PEEK cages containing autograft, InductOS (rhBMP-2) dissolved on a collagen sponge or COLLOSS E was inserted in the intervertebral spaces. They were divided into two groups. 6 pigs were observed for 4 weeks and 5 pigs for 8 weeks postoperatively.

MicroCT (Scanco 40 μ CT) was performed. Principal directions of the trabeculae inside the cage was measured as vectors and standardized before comparison. The percentage of the trabeculae directed along the principal axis of the spine (TDS) was compared using paired T-test.

RESULTS Four weeks postoperatively COLLOSS E had a mean TDS of 57%, which was significantly higher than both rhBMP-2 (44%; $P>0.01$) and autograft (41%; $P>0.001$).

Eight weeks postoperatively rhBMP-2 had a TDS of 57%, which was higher than both COLLOSS E (52%; $P=0.07$) and autograft (51%; $P=0.08$).

The results corresponded to the findings on the histological samples.

CONCLUSION We have demonstrated important differences the mechanisms responsible for the trabecular development in new bone formation using COLLOSS E or rhBMP-2, which corresponds to earlier presented results on metabolic events measured on with PET/CT analysis. The mechanical consequences of these differences are to be investigated.

SURFACE MARKERS OF CIRCULATING POTENTIAL MULTIPOTENT PROGENITOR CELLS DURING BONE REGENERATION BY MULTIPARAMETRIC FLOW CYTOMETRY ANALYSIS

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Introduction: Bone forming mesenchymal progenitor cells (MPC) are important for normal bone regeneration after trauma. Animal studies have documented optimized bone regeneration with MPC. Several studies have reported the existence of circulating mesenchymal progenitor cells.

Hypothesis: Existence of a specific population of circulating mesenchymal progenitor cells involved in bone regeneration, measurable in peripheral blood during initial bone healing after bone trauma.

Material and methods: Respectively 9 or 10 consecutive blood samples were obtained from 10 patients with total hip replacements and 8 patients with hip fractures until 12 weeks after the bone trauma. The phenotype of circulating MPCs isolated from peripheral blood during bone regeneration was characterized by multi parametric flow cytometry. Serum and plasma proteins were determined by ELISA. Clinical and demographic data were obtained from patients files.

Results: Flow cytometry analyses identify and characterize a specific population of circulating mesenchymal progenitor cells in patients regenerating bone traumas, based on several positive and negative surface markers and the correlation between these markers.

Conclusion: Flow cytometry of surface markers on mononuclear cells from peripheral blood define the phenotype of circulating mesenchymal progenitor cells as being mononuclear, CD45-neg., CD34-low/neg. and CD31-, CXCR4- and CD166 positive.

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NO EFFECT OF ETCHING (OR PLASMA CLEANING) ON OSSEOINTEGRATION OF POROUS COATED TITANIUM IMPLANTS – A STUDY IN TEN DOGS

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INTRODUCTION Implant surface treatments that improve early osseointegration may prove useful in long-term survival of uncemented implants.

The purpose of this study was to investigate a specific Acid Etch surface technology, Plasma Clean technology, and conventional plasmasprayed Hydroxyapatite on porous coated titanium implants in a well-established animal model of osseointegration.

MATERIAL AND METHODS In a randomized, paired animal study with ten skeletally mature dogs, four experimental porous coated Ti implants (ø6mm, L10mm) were inserted into the distal femurs of each dog. The four treatment groups were:

1. Control. 2. AET (Acid Etch surface treatment). 3. AET+PLCN (Plasma cleaning surface treatment). 4. PSHA (Plasma Sprayed Hydroxyapatite). After a four week observation period mechanical fixation was evaluated by push-out test and osseointegration was evaluated by quantitative histomorphometry.

RESULTS The PSHA-coated implants were better osseointegrated than the three other groups ($p < 0.05$). Within the deep implant porosity, there was more newly formed bone in the control group compared to the AET and AET+PCLN groups ($p < 0.05$). There was no difference in new bone formation on the outer implant surface between the AET and AET+PCLN groups compared to the control group. No statistically significant differences were found between the four implant groups in terms of mechanical implant fixation.

CONCLUSION In terms of osseointegration PC+PSHA was as expected superior to the other three groups. Neither the specific surface microtexturing treatment by wet acid etching, nor the removal of organic molecular remnants by plasma cleaning offered any advantage in terms of implant osseointegration.

NO EFFECT OF WET ETCHING OR PLASMA CLEANING GRIT BLASTED TITANIUM IMPLANTS ON MECHANICAL FIXATION AND OSSEOINTEGRATION

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INTRODUCTION Interaction between implant surface and surrounding bone determines initial implant fixation. Adherent pro-inflammatory agents such as bacterial endotoxins may negatively affect implant osseointegration, and micro-textural surface structures may positively affect osseointegration.

Therefore the purpose of this study was to investigate the implant fixating effect of both removing all surface-adherent pro-inflammatory agents by plasma cleaning together with the effect of wet etched micro-textural changes on grit blasted implant surfaces.

MATERIAL AND METHODS The study consisted of two paired animal sub-studies in 10 skeletally mature Labrador dogs. Each dog had 2 implant pairs inserted press fit in the proximal tibiae: 1) Ti Grit Blast vs. Ti Grit Blast with wet etched surface, and 2) Ti Grit Blast vs. Ti Grit Blast with wet etched surface, which was additionally plasma cleaned. Observation time was four weeks. Implant performance was evaluated by histomorphometric investigation (tissue-to-implant contact, periimplant tissue density) and mechanical push-out testing.

RESULTS We found no statistical significant improvements by plasma cleaning or wet etching of the grit blasted implant surfaces, neither in regards to osseointegration, nor to mechanical fixation.

CONCLUSION Extensive endotoxin removal by plasma cleaning, and wet etching of grit blasted implant surfaces did not prove any beneficial effect on osseointegration and mechanical fixation in this press fit canine implant model.

INTRAMEDULLARY PRESSURE DURING CEMENTATION OF BI-METRIC FEMORAL STEM WITH PROXIMAL CENTRALISER

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INTRODUCTION Previous studies have shown that higher intramedullary pressure yields deeper cement penetration into cancellous bone during cementation of femoral stem. The use of a proximal stem centraliser may increase the pressure applied on cement during stem insertion, particularly in the region of the proximal femur. This study investigates the efficacy of proximal centralizer used on mat-surfaced femoral component on intramedullary pressures during stem cementation.

MATERIAL AND METHODS We used 8 cadaveric embalmed femora pairs for cementation of femoral prostheses (Bi-Metric, Biomet) with or without proximal stem centralizer. The femora were prepared by standard procedure and the cementation was performed according to 3d generations cementing technique. Intramedullary pressures (kPa) were recorded by 6 pressure transducers. The pressure values (peak pressure, area under the curve (auc), mean pressure) were then compared - according to medial and lateral as well as the proximal and distal Gruens zones both within and between the groups.

RESULTS There was clearly pressure gradient with significantly increasing pressure values distally compared to proximal Gruens zones. The peak pressure and auc measurements were higher, but not significantly in the group with proximal centralizer compared with control group (two-way ANOVA $p=0.33, 0.41$) at the same Gruens zones, whereas the mean pressure values were higher in control group (the differences were not significant, 0.165). We found no significant differences between the medial and lateral Gruens zones for those 3 pressure parameters.

CONCLUSION We were not able to show significantly positive effect on intramedullary pressures generated under cementation of femur prosthesis with proximal centralizer. The cement penetration and quality of the cement mantle are under currently investigation.

LONG TERM NICOTINE USE REDUCES SUBCHONDRAL BONE MINERAL DENSITY IN NON-ARTHRITIC PROXIMAL TIBIA; AN EXPERIMENTAL STUDY IN RABBITS

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INTRODUCTION: Cigarette smoking has been shown to reduce new bone formation, prosthetic osseointegration and induce periprosthetic bone loss. No direct link has yet been shown to indicate nicotine as the direct cause of the bone loss.

PURPOSE: To evaluate the impact of long term nicotine load on the subchondral bone mineral density in the proximal tibia of healthy rabbits.

MATERIAL AND METHODS: Fifteen New-Zealand white rabbits 3,5 – 4,5 kg in two groups of 5 and 10 animals. Control group (N=5) received no treatment. Treatment group (N=10) received six months of continuous subcutaneous nicotine infusion $6\mu\text{g}/\text{kg}/\text{min}$ via mini-osmotic pumps (2ML4 pumps, Alzet®, Durect corp. Palo Alto, CA. USA). The pumps were implanted subcutaneous and changed every 4 weeks. Every month the plasma cotinine level was measured (nicotine degradation product). After 6 month the rabbits were killed and the proximal tibia were explanted. Measurement of BMC and BMD of the proximal tibia were performed using a DEXA scanner (Norland XR46; Norland Corp. WI.USA). The small animal experimental software setting was used (speed 2mm/sec; pixel size 0,5 x 0,5 mm). Three ROI's (regions of interest) were measured. ROI 1 represented the subchondral bone just below the joint 2,5 mm in height. The two next ROI's were the following 5mm high columns below.

RESULTS: BMC / BMD were significantly lower in the nicotine treated group: ROI 1: BMC= 0,2672g (SD=0,0154) and BMD=0,5275 g/cm² (SD=0,0270) compared to the control group BMC: 0.3137g (SD=0,0143) and BMD= 0.6353 g/cm² (SD=0,0101). In both cases P < 0,0005 t-test. The differences diminished in the following two ROI's but still significant in ROI 2.

CONCLUSION: Long-term nicotine exposure has highly significant detrimental effect on the tibial plateau subchondral bone mineral content in young healthy rabbits.

CMC PUDDY WITH OR WITHOUT EQUINE COLLAGEN LYOPHILISATE IN HUMERUS DRILL DEFECT - A PILOT STUDY IN SHEEP

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INTRODUCTION The need for alternatives to autograft in bone defects has led to many new products. COLLOSS® E, an equine collagen lyophilisate has previously shown osteogenic properties in other experimental settings. The purpose of this study was to investigate the osteogenic properties of COLLOSS® E in a sheep model. Furthermore this study will clarify the bone formation process in a drill defect over time.

MATERIAL AND METHODS Six sheep underwent a bilateral humerus drill defect (10 mm deep and 11 mm in diameter). In each animal, the drill hole was filled with a puddy consisting of 100 mg carboxymethyl cellulose (CMC), 100 mg collagen powder, and 1 ccm autologous full blood in one side, and a combination of this puddy and 20 mg COLLOSS® E in the other. The animals was divided into three groups of two animals and observed for 8, 12 and 16 weeks. Bone formation in the drill holes was evaluated using QCT. On a three sampled scan plane, a 5x5 mm and a 10x10 mm region of interest (ROI) was created. For each ROI a mean total density of each implantation site was calculated.

RESULTS No significant differences in defect healing by density was detected. There was no convincing tendency to better healing in the COLLOSS® E-treated groups at any time point. This was the case for both ROI. There was a tendency to increased healing by density with increased observation time independent of the treatment groups

CONCLUSION In this pilot study, there was no significant increase in bone density measured with QCT when COLLOSS® E was used to promote bone healing in humerus drill defect. Histomorphometry and ICT are to be performed to validate/support current results.

EVALUATION OF IMMORTALIZED HUMAN MESENCHYMAL STEM CELLS AT DIFFERENT POPULATION DOUBLINGS LEVELS

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INTRODUCTION Immortalized cells are often used for in vitro studies, but proliferation and differentiation of the cells may vary considerably at different population doublings levels (PDL). The aim of this study was to characterize differences between early and late PDL.

MATERIAL AND METHODS Telomerase-immortalized hMSCs at PDL 180-189 (early) and PDL 274-283 (late) were cultured in 10%FCS-DMEM (control). Proliferation was determined using SYBR green assay. Cells stimulated by calcitriol were analyzed for ALP activity on day 4 and 7. Control medium containing dexamethasone, β -glycerophosphate and ascorbic acid was used to induce osteogenic differentiation, and calcification was assessed using alizarin red staining after 1, 2, and 3 weeks.

RESULTS The proliferation was stronger in late versus in early PDL (PD time 1,5 versus 2,3 days). ALP activity was lower in early PDL at all conditions and time points. Calcitriol supplemented medium induced higher ALP levels than control medium, the ratio calcitriol/control being highest for early PDL. Late PDL increased the ALP during culture independent of calcitriol addition, whereas early PDL only increased upon stimulus. Early PDL responded strongest to the osteogenic stimulus as verified by alizarin red. Results from studies of in vivo ectopic bone formation in mice are pending.

CONCLUSION Differences were observed between the various PDL. Early PDL had a lower proliferation, but higher capacity for osteogenic induction, as compared to late PDL. Therefore, careful consideration regarding PDL is needed when studying immortalized cells.

EFFECTS OF CDX I, A NATURAL HERBAL AGENT, ON PROLIFERATION AND OSTEOGENIC DIFFERENTIATION OF hMSC-TERT CELLS

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INTRODUCTION Osteoarthritis (OA) is one of the most common chronic age-related disorders with the pathophysiology of cartilage degeneration, synovial fibrosis, and osteophytes. CDX I, an extract from seven oriental herbs, was widely used in clinic for the treatment of OA. We aimed to investigate the effects of CDX I on the proliferation and differentiation of human mesenchymal stem cell line overexpressing human telomerase reverse transcriptase (hMSC-TERT) in vitro.

MATERIAL AND METHODS The effects of CDX I on growth of hMSC-TERT cells was assessed by the SYBR green I assay. Osteogenic differentiation of hMSC-TERT cells was assessed by alkaline phosphatase (ALP) activity, ALP histochemical staining, Alizarin Red S staining, and quantification of calcium deposit.

RESULTS CDX I (0.78-50 µg/ml) promote the growth of hMSC-TERT cells. Percentages of cell growth in CDX I group (6.25, 12.5 and 25 µg/ml) were significantly higher than that in the control group ($P=0.023$, 0.021 and 0.006). The 50% inhibitory concentration of the cells (IC₅₀) was 122.7µg/ml. The ALP activity in CDX I was higher than that in osteogenic stimulation medium. Similar results were seen by ALP histochemical staining. Alizarin Red S staining and calcium deposit quantification showed that the calcium deposit in osteogenic stimulation medium decreased with the increasing concentration of CDX I, consistent with the results of real-time RT-PCR.

CONCLUSION CDX I can promote the proliferation of hMSC-TERT cells, increase its ALP activity, but decrease its mineralization. The findings suggest that CDX I can be used to stimulate MSCs during microfracture treatment in the repair focal, full-thickness chondral defect. At the same time, CDX I may inhibit the osteophyte formation, which provides the possibility of a new regimen for OA treatment with little side effects.

LARGE-SCALE GENE EXPRESSION PROFILING OF MESENCHYMAL STEM CELLS EXPOSED TO SMOOTH TANTALUM VS. TITANIUM SURFACES

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INTRODUCTION: Metallic implants are widely used in orthopedic, oral and maxillofacial surgery. Durable osseous fixation of an implant requires that osteoprogenitor cells attach and adhere to the implant, proliferate, differentiate, and produce mineralized matrix. We previously observed that human mesenchymal stem cells (MSCs) adherent to smooth tantalum (Ta) surfaces demonstrated superior biocompatibility compared with titanium (Ti) coatings. The aim of the present study was to investigate the interactions between MSCs and smooth surfaces of Ta and by means of whole-genome microarraytechnology.

MATERIAL AND METHODS: Immortalized human mesenchymal stem cells were cultivated on smooth Ta and Ti surfaces. Total RNA was extracted after culturing for 1, 2, 4, and 8 days and hybridized to Affymetrix whole-genome microarrays (N=16). Replicate arrays were averaged and the ratios of gene expression by MSCs cultivated on Ta versus Ti coating were calculated and lists of upregulated genes were generated.

RESULTS: For both Ta and Ti coatings, the vast majority of genes were upregulated after 4 d of cultivation. Genes upregulated by MSCs cultivated on Ta coating for 4 d were annotated to relevant GO terms. Ti-regulated Gene Ontology annotation clusters were predominantly transcription-related. By using the K-means clustering algorithm, 10 clusters containing more than 5 genes were identified. Moreover, various genes related to osteogenesis and cell adhesion were upregulated by MSCs exposed to Ta surface.

CONCLUSION: Microarray analysis of MSCs exposed to smooth metallic surfaces of both Ta and Ti generally showed a huge increase in transcriptional activity after 4 d of cultivation. Ta coating may induce increased adhesion and earlier differentiation of MSCs compared to Ti surface making Ta a promising biocompatible material for bone implants.

THE NUMBER OF FIRST HIP FRACTURES IN NEAR FUTURE INCREASES DESPITE DECREASING TRENDS IN FIRST HIP FRACTURE INCIDENCE RATES

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INTRODUCTION: Being able to predict the future is interesting, including the ability to predict the expected number of hip fractures. However, the ability to correctly estimate numbers to occur has proven difficult. Increasing population above 65 is expected until 2040. This could affect the future number of hip fractures, however; incidence rates of hip fractures now show decreasing tendencies in Scandinavia. Funen County, Denmark has experienced decreasing hip fracture incidence rates from 1994 to 2005.

PURPOSE: To estimate the number of first hip fractures expected to occur from 2010 to 2040.

MATERIAL AND METHODS: Age and sex specific incidence rates of first hip fracture in Funen County, Denmark 1994 to 2005. Expected population figures until 2040. Two models: 1) projection of decreasing age and sex specific trend. 2) Projection of constant overall age and sex specific incidence rate.

RESULTS: The population increases 118 % in men and 116 % in women with maximum in 2030. Forecasting hip fractures with model 1 (decreasing trend) to 2040 shows overall increase in counts from 826 to 1010 (935-1102) fractures or 151% in men and 111% in women. With variation in-between age groups. Model 2 (constant incidence) shows overall increase to 1614 (1486-1751) fractures or 214% in men and 187% in women, with highest increases for the oldest. For ages below 60 men showed a 32% decrease and women constant count. Mean age in 2005 was 77 in men and 81 in women, in 2040 approximately 83 and 84.

CONCLUSION: A substantial increase in number of hip fracture patients can be expected unless a dramatic effect of prevention efforts which exceeds the current decrease in incidence figures is seen. The highest increases are expected in the ages above 85 years. This underlines the need for effective prevention efforts.

SIX CASES OF GROUP-A-STREPTOCOCCAL NECROTIZING FASCIITIS

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INTRODUCTION: Necrotizing fasciitis (NF) is a life threatening infection involving the superficial muscle fascia, most often caused by Group-A-Streptococci (GAS) During the last two decades an increase of severe GAS infections, i.e.NF, has been noted worldwide. The reason is unknown, but spread of more virulent clones, aging population and increasing numbers of disposing diseases are possibilities.

MATERIAL AND METHODS: Retrospective study, 6 cases of GAS-NF, Viborg Hospital, 2005-08.

RESULTS: Six cases of NF were identified. The patients mean age was 56 years. Four were males. Five had concomitant disposing conditions (2 diabetes, 2 suspected of diabetes, 2 immunosuppressed, 2 obese). Four had had sore throat 5-14 days before hospitalisation (2 pos. Strep-A-test). All presented with fever, swelling and pain. Ulceration was present in one. The tentative diagnoses at time of hospitalisation were erysipelas, DVT, bursitis and pulmonary embolism. Five were examined by a surgeon within 24-36 hours. All had GAS in tissue cultures, 4 had GAS bacteremia. All GAS strains were susceptible to Penicillin and Clindamycin. All survived, but underwent multiple debridements, amputation was necessary in 2 cases.

CONCLUSION: NF is a surgical emergency. Early operative debridement combined with antibiotic therapy(Penicillin and Clindamycin)are major determinants of outcome. Additional immunoglobulin can be beneficial. However early recognition is difficult clinically. Early finding of GAS may assist diagnosis and result in early surgical examination, the cornerstone of diagnosis, even if the physical findings are not suggestive for NF. Therefore we propose, in patients with fever and cutaneous inflammation, to ask about sore throat and take GAS rapid antigen tests from throat, wounds and tissue, to detect GAS as early as possible.

PONSETI TREATMENT OF IDIOPATHIC CLUBFOOT - A PRELIMINARY REPORT OF THE OUH EXPERIENCE

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INTRODUCTION: Treatment of clubfoot (CTEV) remains a challenge. The last decade many centers around the world have changed from early operative treatment (EOT) to conservative treatment a m Ponseti. This is due partly to problems with results after EOT including stiffness and relapses - partly to reports of promising late results after Ponseti treatment. We present our early experience after change to Ponseti treatment of all idiopathic clubfeet after 1th of January 2007.

MATERIAL AND METHODS: We followed 25 consecutive patients prospectively. 22 boys and 3 girls. 13 were bilateral , making 38 feet with CTEV. All were scored after Pirani and Dimeglio at presentation and at Plaster of Paris(POP) removal. Number of POP-changes before decision of Achilles Tendon Lengthening(ATL) were registered as was use of the Abduction Brace(AB), complications and need of operative treatment. All treatments were made by the authors. TC- angles were measured after 3 months of AB-treatment.

RESULTS: 22 patients were less than 1 month of age at start of treatment. 1 were admitted late. Two were early recurrences after treatment elsewhere. Dimeglioscore were 15(10-17) median(range) at presentation and 0(0-3) at POT-removal. Piraniscore were respectively 5,5(2,5-6) and 0,5(0-2,5). 5(4-16) changes of POT were needed before decision of ATL. 31(82%) had performed ATL. TC-angles were: AP 29(9-44), Lateral 22(8-52). 3 had repeated POT-treatment. 1 bilateral was changed to EOT. Median follow-up time was 9months(2-15).

CONCLUSION: We find our early results promising. The method is not without problems. It seems – however- possible to quickly correct CTEV to a soft and mobile foot without EOT in most patients. Further follow-up is needed to learn about function in the ambulated child and whether the correction is lasting.

TAXI RELATED INJURIES IN COPENHAGEN 1999-2007

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INTRODUCTION Media interest in traffic accidents involving taxis is high. This study presents data on how often taxis are recorded as being involved in accidents and incidents resulting in bodily harm.

MATERIAL AND METHODS Patients involved in taxi related accidents, and admitted to RHTC during the period 1.1.99-30.6.07, were identified using free-text search in computerized hospital records. Further information was obtained from Trauma Audit & Research Network (TARN). Patients were followed to in-hospital death or discharge.

RESULTS Fivehundredone patients were included. The annual number of taxi related accidents did not increase during the investigated period. Onehundredthirtyfive (27%) were received by trauma team, according to predefined triage criteria. Thirtynine (29%) of these were registered in TARN, median ISS =18 (4-54). Five patients died in traffic accidents. Four main groups of patients were identified: Taxi drivers (18%), passengers (20%), pedestrians (25%) and others (38%). Three injury mechanisms were identified: Traffic-related (82%), interpersonal violence (12%; 52 ?, 10 ?) and getting on/off a taxi (6%). Twohundrednintyseven (59%) of all accidents occurred during the weekend. The majority of episodes with interpersonal violence happened between 22.00-09.00hrs. Apart from open wounds and superficial lesions, the most frequent lesions were minor head trauma (70) and fractures of the lower extremity (40). Eleven patients had intracranial hemorrhage. Sixtyone patients were admitted for further surgical interventions. The most frequently performed procedure was ex-fix of tibial fractures (12).

CONCLUSION A suspected rise in taxi related injuries was not found. The majority of injuries were superficial. However a number of fractures, intracranial hemorrhages and 5 traffic related deaths were recorded.

DAMAGE CONTROL SURGERY IN CIRCULATORY UNSTABLE POLYTRAUMA PATIENTS

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INTRODUCTION: In recent years we have had limited but increasing experience with damage control surgery. The aim of the study was to elucidate if a protocol for damage control surgery including initial retro and/or intraperitoneal packing was a tool to minimize bleeding in patients who otherwise would have died in the resuscitation room. The method was introduced after a training program including surgeons and orthopaedic traumatologists.

MATERIAL AND METHODS: From December 2006 to October 2007, 10 patients, median age 34 were admitted with ongoing bleeding from abdominal and/or pelvic injuries. All had several other lesions. Because of severe haemodynamic instability, in four patients, the operative procedure was carried out in the resuscitation room. On arrival one had asystolia and died during the procedure. Three other patients were in a critical condition. One of these had asystolia six times. Bloodtransfusions during the procedure was median 22 L.

Six other patients were after initial haemodynamic stabilisation, transported to the operation theatre. Transfusions were median 24 L during the operative procedure. The damage control surgery was in nine patients followed by protocol trauma CT-scanning and angiography with endovascular embolization of bleeding arteries. Pelvic and retroperitoneal packing was removed in 48 hours and followed by vacuum-assisted closure of abdomen.

RESULTS: Two patients died within 48 hours after arrival from brain injuries. A total of seven patients survived. All underwent multiple operations because of organ and / or musculo-skeletal lesions.

CONCLUSION: A protocol with training of surgeons, introduction of damage control surgery, packing and endovascular embolization of bleeding arteries seems to improve the possibility of survival in a small number of critical injured patients.

A PROSPECTIVE RANDOMIZED STUDY OF NON-ABSORBABLE VERSUS ABSORBABLE SKIN SUTURES IN ENDOSCOPIC CARPAL TUNNEL DECOMPRESSION

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INTRODUCTION Absorbable sutures in wound closing have become increasingly popular, even though studies have found that they cause more immunological and inflammatory reactions. Recent studies have compared the use of absorbable versus non-absorbable sutures in wound closing following open carpal tunnel release, but there are no reports regarding this issue in endoscopic carpal tunnel release. The purpose of the present prospective randomized study was to compare the use of absorbable vs. non-absorbable sutures for wound closing following single-portal endoscopic carpal tunnel release and evaluate the effect on the incidence of patient-reported perception of pain/discomfort following surgery, cosmetic results and incidence of wound infection.

MATERIAL AND METHODS 58 hands in 50 patients (36 females, 14 males, mean age 48 years, range 21-73) were randomized into group 1 (non-absorbable sutures – 5:0 monofilament polybutester – Novafil®) and group 2 (absorbable sutures – 4:0 monofilament Polyglytone*6211 – Caprosyn®). The patients were operated upon using the Agee one-portal system for endoscopic carpal tunnel release. The patients kept records on a day-to-day basis regarding their perception of pain and discomfort until the day of suture removal. Follow-up was at 2 weeks and 3 months for assessment of clinical outcomes. Results were compared by non-parametric statistical tests.

RESULTS Adequate surgical decompression of the median nerve could be achieved in all patients. We found no significant differences between the two groups with regard to patient reported perception of pain/discomfort, cosmetic outcome evaluated by the patients and the orthopedic surgeons, and incidence of wound infection.

CONCLUSION Non-absorbable and absorbable sutures are both suitable for skin closure after endoscopic carpal tunnel release.

ARTHROSCOPIC SUBACROMIEL DECOMPRESSION. EVALUATION AND PREDICTION OF RESULTS USING THE WESTERN ONTARIO ROTATOR CUFF INDEX

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INTRODUCTION: The patient based questionnaire WORC Index was used as outcomes measure in patients undergoing ASD. The index' ability to predict outcome was assessed.

MATERIAL AND METHODS: 39 patients, 24 female and 15 male, median age 55, range 48-78 years, with shoulder pain of more than six months duration and clinical signs of impingement were operated on. In 16 patients resection of the AC-joint was included in the procedure. The 21-item WORC questionnaire was filled in by the patients preoperatively and at the 3 to 6 months postoperative follow up.

RESULTS: Median preoperative WORC value was 1270, range 621-2006, interquartil range 1095-1498, whereas median postoperative WORC value was 313, range 21-1717, interquartil range 164-671. Median reduction of WORC value was 70%, range -47-98%, interquartil range 49-88%. In 30 patients the preoperative score was reduced by more than 50% (=group A) while 9 patients had their preoperative score reduced by less than 50% (=group B). 0 of 30 patients in group A claimed workman's compensation, whereas 5 of 9 patients in group B claimed workman's compensation ($p < 0,002$ Fisher's fourfold table test). 8 of 30 patients in group A gave a history of trauma, whereas 7 of 9 patients in group B gave a history of trauma ($p < 0,02$ Fisher's fourfold table test). The patients in group B had a higher preoperative score in the subscale emotions than the patients in group A ($p < 0.05$ Mann-Whitney's rank sum test). No such differences were found between the groups A and B regarding the subscales physical symptoms, sports/recreation, work or lifestyle.

CONCLUSION: ASD is effective in reducing patient reported complaints as measured by the WORC Index. Workman's compensation claim, history of trauma and a high score in the subscale emotions in the preoperative WORC Index seem to predict a poor outcome.

COLLES FRACTURE TREATED WITH NON-BRIDGING EXTERNAL FIXATION - A 1 YEAR FOLLOW UP

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INTRODUCTION This study evaluates distal radial fractures treated with Non-Bridging External Fixation (NBEF). At one year follow up reduction, anatomic and functional outcome in 75 patients were evaluated.

MATERIAL AND METHODS In 2002 and 2003 we treated 190 consecutive patients with a distal radius fractures. According to Olders fracture classification, 48 (25.5%) had a type I (conservative treatment), 37 (19.5%) had and type IV (other method) and 105 (55%) had a type II/III (NBEF). Type II/III was followed one year after surgery. 30 patients (28.5%) were lost for follow up. Evaluations were based on x-ray (post-operatively, five and 52 weeks postoperatively), modified Gartland & Werley score (evaluate functional outcome) and visual analogue scale (VAS)-score. Main statistic analysis was parried t-test.

RESULTS 75 patients (73 females/two males, mean age 67.8 years (range 29-93 years)) treated with NBEF were followed up five weeks and one year after surgery. 53 patients (71%) were operated primarily and 22 (29%) secondarily (increased dislocation of the fracture regardless of initially closed manipulation) mean 9.7 (rang 2-13) days after the trauma. No statistically significant difference were found in radial length, angulation or inclination, when difference between postoperative and five and 52 weeks follow up were calculated. Modified Gartland & Werley score at 1 year follow up: 36 (48%) excellent, 30 (40%) good and nine (12%) fair and zero poor. Mean VAS-score after one year was 7.7 (SD: 1.46) (rang 0 – 52). We observed three (4%) collapsed fracture, one extensor pollicis longus rupture and 30% superficial infections.

CONCLUSION NBEF offers a reliable method of maintaining achieved reduction of Colles' fracture and good functional outcome.

OUTCOME AFTER NEEDLE APONEUROTOMY IN DUPUYTREN'S DISEASE

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INTRODUCTION Needle aponeurotomy (NA) of Dupuytren's disease is a relatively new treatment in Denmark. This study was designed to assess subjective and objective results following NA in primary and recurrent Dupuytren's disease.

MATERIAL AND METHODS 226 patients (339 cords) were treated over a one year period. A subgroup of 49 patients (40 cords) had previously undergone surgery. Mean age at NA was 67 [range 26-89] years. All cords were sorted according to Tubiana's classification. The total passive extension defect (TPED) was measured before surgery and at 6 weeks post-op. Complications in terms of infection, paresthesia, lesions of nerve, tendon, or skin were recorded after treatment.

RESULTS The mean overall TPED improvement in the group with primary Dupuytren's disease was 64%. The best results were obtained at the metacarpophalangeal joint (84%) compared with the proximal (42%) and distal (67%) interphalangeal joints. The highest TPED reduction was gained in Tubiana stage I (69%) versus Tubiana stage IV (58%). In the recurrent Dupuytren's disease group the same pattern was seen, however to a much lower extent, with an overall TPED improvement of 39%. Best results were seen in Tubiana stage I (51%) whereas the overall TPED in Tubiana stage IV only improved 37%. Of 339 fingers, there were no nerve or tendon injuries. One patient experienced a superficial infection, paresthesia in eight cases resolved within six weeks. 16 patients needed analgesics for an average of three days. The visual analogue scale pain score first post-op day was 1.5. Employed patients resumed work after 1.2 days.

CONCLUSION NA seems to be a safe procedure with only few complications. The best short term outcome of NA is obtained in the metacarpophalangeal joint in low Tubiana stages.

THE CLENCHED FIST SYNDROME, A PRESENTATION OF EIGHT CASES AND AN ANALYSIS OF THE MEDICOLEGAL ASPECTS

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INTRODUCTION Clenched fist is a rare disorder of the hand with fixed contractures of fingers. The condition is often preceded by even minor trauma or surgery, but these events do not explain the severity of the contractures and clenched fist is generally considered to be a conversion disorder. Extension of the fingers is painful and hygienic problems can be considerable. The patients may express a strong wish for amputation of fingers, but this may lead to contractures of adjacent fingers. Psychiatric disease is frequent in clenched fist patients.

MATERIALS AND METHODS A review of medical records of eight patients with clenched fist, who claimed economic compensation from The Danish Patient Insurance Association.

RESULTS Six patients developed clenched fist after operative procedure, two cases developed after trauma. Four patients had amputations of clenched fingers, three of these patients subsequently developed new contractures. Four of the patients had a history of psychiatric disorder. The claims for compensation were recognized in five postoperative cases, two of these by appeal to The Patients' Injury Board of Appeal. The two posttraumatic cases were rejected.

CONCLUSION There is an increasing awareness of the condition in The Danish Patient Insurance Association, and the current practice of recognition is parallel to the practice concerning claims from patients with complex regional pain syndrome.

ANGIOGRAPHIC EMBOLIZATION OF ARTERIAL LESIONS AFTER BLUNT TRAUMA IN THE PELVIC REGION

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INTRODUCTION Bleeding arterial lesions is well known after unstable pelvic fractures. In two months we have seen two patients with bleeding arterial lesions after blunt soft tissue injury to the pelvic region

MATERIAL AND METHODS I. 29 years old male. Involved in a car collision from his left side. Several injuries. Circulatory stable with systolic blood pressure of 150. Growing hematoma in his left gluteal region. Angiographic examination visualized extravasation from his left inferior gluteus artery. Successfully treated with angiographic embolization. II. 60 years old female. had a fall from a staircase. On arrival hypotensive with systolic blood pressure of 70. She had a large hematoma of here right gluteal region and thigh. She became circulatory stable after angiographic embolization of bleeding right inferior gluteal artery.

CONCLUSION Extravasation of arterial contrast from lesions of iliac or branches from iliac arteries is a well known after unstable pelvic ring fractures. The two cases illustrates that arterial lesions in the gluteal region has to be taken in account also when there is no pelvic ring fracture present.

PROMISING EFFECT OF INTRAARTICULAR ROPIVACAINE IN FEMORAL NECK FRACTURES TREATED WITH INTERNAL FIXATION

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INTRODUCTION Reducing pain is an essential factor for early mobilisation after internal fixation of femoral neck fractures. Systemic opioids have side effects that might obstruct mobilisation and induce deliria and nausea. We hypothesized that intraarticular local anaesthetic results in pain relief without side effects and reduction in systemic opioid usage. We found no other studies describing this method in the literature. We present a pilot study on use of intraarticular local anesthesia in femoral neck fracture S72.0 patients.

MATERIAL AND METHODS All 22 patients underwent osteosynthesis with 2 canulated hip screws and were prescribed regular paracetamol and supplementary opioid rescue analgesia as necessary. Pilot group: 11 patients received one peroperative (30 mL=100 mg) and 6 postoperative bolus installations (10 mL=100 mg) of open label Ropivacaine through an intraarticular catheter, which was removed after 48 hours. Control group: 11 patients consecutively diagnosed in Sept. 2006, who received only standard pain treatment. The need for opioid rescue analgesia standardised to mg equivalent of oxycodone was compared between the two groups for the first two days after surgery.

RESULTS The mean (CI) consumption on the 1st day after surgery was 12 (15-18) mg in the injection group and 28 (18-38) in the control group ($p=0,007$). On the 2nd day the consumption was 15 (6-23) and 26 (15-37) mg ($p=0,073$), respectively. Combined for the two days: 26.3 (14-39) versus 54 (34-74) ($p=0.012$).

CONCLUSION This pilot-study suggests that intraarticular application of Ropivacaine may reduce opioid requirement after osteosynthesis of femoral neck fracture. However, this is an open pilot study with few patients. We find the results promising and have initiated a double-blinded prospective randomised trial according to the GCP guidelines.

A PREGRADUATE INTERPROFESSIONAL TRAINING WARD IS LESS COSTLY IN TREATING PATIENTS WITH PRIMARY HIP- AND KNEE ARTHROPLASTY

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Introduction In 2004 the first Danish pregraduate interprofessional training ward was established at The Regional Hospital Holstebro inspired by experiences from Sweden. Medical, nursing, occupational therapy and physiotherapy students were to be responsible for patients in a part of an orthopaedic department supervised by educated personnel. The aim of this study was to see if the pregraduate interprofessional training ward is cost effective in treating patients compared to a conventional ward with educated personnel.

Material and methods One-hundred and thirty-six patients admitted for operation with primary hip or knee arthroplasty were included in the study. All costs were recorded in the pregraduate interprofessional training ward and in the conventional ward. Follow-up was done using questionnaires (EuroQol 5-D) 3 months after the operation. Comparison was done by univariable and multivariable testing of costs and effect.

Results In both the univariable and multivariable testing the pregraduate interprofessional training ward was less costly than the conventional ward, with a reduction in cost of DKR 2443 per patient primarily due to a shorter stay in hospital. No difference was found in health related quality of life and complications.

Conclusion A pregraduate interprofessional training ward is less costly in treating patients with primary hip- and knee arthroplasty.

REDUCED GASTROINTESTINAL ADVERSE EFFECTS FROM HEMOBOOST AND KRÄUTERBLUT AS POSTOPERATIVE IRON SUPPLEMENTATION. - A RANDOMISED CONTROLLED TRIAL IN KNEE REPLACEMENT SURGERY

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INTRODUCTION The objective of this study was to determine the effect and adverse effects of the natural products Hemoboost and Kräuterblut compared with the usually administered ferrous sulphate in knee arthroplasty.

MATERIAL AND METHODS We randomised 72 patients after total knee arthroplasty to receive Hemoboost, Kräuterblut or ferrous sulphate for 12 weeks after surgery. A haematological profile were obtained prior to surgery, and at one, four, eight and 12 weeks after operation. All patients completed the study. The three groups differed only in the treatment administered.

RESULTS During the observation period, the number of constipated patients was reduced from 9 to 2 in the Hemoboost group, from 11 to 2 in the Kräuterblut group and from 15 to 5 in the Ferrous sulphate group. Correspondingly, the overall occurrence of gastric irritation in the groups was reduced from 9 to 3, from 13 to 3 and from 15 to 6 cases, respectively. Hemoboost and Kräuterblut were associated with less constipation ($P = 0.01$ and $P = 0.001$) and fewer cases of gastric irritation ($P = 0.01$ and $P = 0.04$) than Ferrous sulphate. There was no statistical significant difference in the change of haemoglobin or other measured parameters between the three groups.

CONCLUSION As there is no difference between the three iron drugs of this study, and as no other studies have found any difference compared to placebo, routine iron supplementation following knee arthroplasty should be avoided or the drugs should be substituted for others with a lower frequency of gastrointestinal irritation.

THE USE OF FASCIA ILIACA COMPARTMENT BLOCK (FIB) FOR HIP FRACTURES (HF) IN DENMARK – A NATIONAL QUESTIONNAIRE

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INTRODUCTION Fascia Iliaca compartment block (FIB) effectively block N. Femoralis and N. Cutaneus Femoris. FIB is easy to perform, requires minimal introduction, no expensive equipment and is accessed with a minimal risk approach. Conventional pain treatment (NSAID, paracetamol and IV morphine) has undesirable side-effects; unwanted in HF-patients with high age and co-morbidity. It is therefore reasonable to use FIB as a supplement to traditional pre-operative analgesia for patients with HF. This study investigates the national distribution of the use of FIB. Additional to clarify who performs (orthopedic or anaesthesiologist) and on witch education level the performer was.

MATERIAL AND METHODS A short national questionnaire was send to the 26 orthopedic departments receiving HF patients. The focus was on the use of FIB, on whom performing FIB and on witch education level the performers was.

CONCLUSION The use of FIB, as pain treatment for HF, is widespread in Denmark – still 38.5% are not using FIB (out of this 7.7% are using N. Femoralis block preformed by anaesthesiologist). FIB is mainly being preformed by junior orthopedic (62.5%) – this could be an opportunity to introduce FIB as a skill in the introduction program. 75% of the department does not repeat FIB, if delay to surgery > 8 -10 h. – this could be given a second thought. We will strongly recommend FIB preformed by Junior Orthopedic as a standard procedure for HF.

POSTOPERATIVE ANALGESIA FOR PERTROCHANTERIC FRACTURE OF THE HIP

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INTRODUCTION Treating postoperative pain in patients with hip fracture can be a matter of difficulty because of the age and frailty of these patients. Patients with hip arthroplasty have been treated successfully with infiltration of local anesthetics. The aim for this project was to find out whether this procedure was useful also for patients with pertrochanteric fracture of the hip.

MATERIAL AND METHODS The study was a prospective pilot study without control group. For a period of 4.5 months, 9 patients with pertrochanteric fracture of the hip were included in the study. The study was approved by the local Ethics Committee. During surgery, the patients received intramuscular infiltration of 100 ml ropivacain 2 mg/ml + 30 mg ketorolac + 0.5 mg epinephrine. At wound closure a small catheter was placed in the operative area and 8-10 hours after surgery a bolus of 20 ml ropivacaine 7.5 mg/ml + ketorolac 30 mg + epinephrine 0.5 mg was injected in the catheter which was subsequently removed. Patients were followed for 4 days. In addition patients were treated with paracetamol and tramadol.

RESULTS A total of 5 patients needed supplementary morphine for pain after surgery, one of these was treated already during the first 12-hour postoperative period. Four patients (44 %) needed no additional morphine. Pain-score : NRS-score (0-10) (in rest) was in average < 2 for the first 72 hours post operation.

CONCLUSION The infiltration of local anaesthetics during surgery seems to give satisfactory analgesia after surgery for pertrochanteric fracture of the hip although further investigation must be carried out before any general recommendations can be made.

THE IMPORTANCE OF PRECISE AND REPRODUCIBLE POSITIONING OF THE LEG WHEN ASSESSING PERI-PROSTHETIC BMD IN TKA

*Michael Tjørnild, Thomas Bender Hansen, Kjeld Søballe,
Per Møller Hansen, Maiken Stilling*

Orthopaedic Research Aarhus, Århus Universitetssygehus Tage-Hansens Gade, Regionshospitalet Silkeborg, ortopædkirurgisk afdeling

Introduction Dual Energy X-ray Absorptiometry (DEXA) is used to measure Bone Mineral Density (BMD) in evaluation of bone-remodelling after total knee arthroplasty (TKA). The precision of repetitive scans rely on the quality of the scanner as well as the homogenous position of patients at follow-up scans. Protocols for positioning of knee-patients vary greatly and few, if any, consider the potential for rotation of the tibia affecting results. To prepare a clinical study we wished to develop a protocol for a reproducible set-up to measure peri-prosthetic BMD in cemented TKA addressing the importance of rotational variability in positioning of patients.

Material and methods We measured BMD of the proximal tibia in two dry human cadaver-bones implanted with two different knee prostheses (PFC Sigma; DePuy). We performed 5 scans for every 5 degrees of rotation in the lateral-medial and anterior-posterior plane. First we scanned the phantoms with the implants press fit and secondly with the implants cemented into the bones. 3 regions of interest (ROI) were evaluated. We used a Lunar PA 2005 DEXA scanner with a 10.10 version of enCORE software. Detection and subtraction of metal as well as the point-typing of prosthesis, cement and bone was assessed. We used Students t-test (95% level).

Results The scanner detected metal and point-typed prosthesis, cement and bone correctly. 5-10 degrees of rotation on AP scans ($P < 1\%$) as well on lateral scans ($p < 1\%$) significantly changed the measured BMD in most scans. The Coefficient of Variation in repetitive scans was below 2.1% without and below 1.7% with cement.

Conclusion Our data confirms the importance of reproducible positioning of the leg assessing peri-prosthetic BMD in TKA. We stress the use of a clinical protocol that prevents rotation to ensure comparable data in clinical follow-up.

SIMULATION AND OPTIMIZATION OF AN ORTHOPAEDIC SURGICAL UNIT

*Christian Dehlendorff, Søren Merser, Murat Kulahci,
Klaus Kaae Andersen*

Informatik og Matematisk Modellering, Danmarks Tekniske Universitet

INTRODUCTION This paper presents discrete event simulation (DES) as a tool for analyzing patient flow through a Danish orthopaedic surgical unit. By modelling the patient flow the effect of changing the setup can be analyzed electronically. Simulation is widely used in US and UK as a planning and management tool in the industry and in the past decade also in health care applications.

MATERIAL AND METHODS After a system study, the DES model is implemented in a simulation program. The flow of patients through the surgical unit is observed and incorporated in the model. Output from the simulation model is validated on the observed flow. A DES model was successfully implemented and consisted of operating rooms, wards, recovery beds, preparation room and staff. Mixtures of elective and acute patients were generated according to the measured data and send through the unit. Waiting times and durations as well as staff utilization are obtained from the model.

RESULTS The DES allows virtual simulation and experimentation of a system that is otherwise hard to change due to costs, physical limitations, and staff and patient considerations. Patient flow and resources can be optimized by use of the model, since alternative configurations can be tested by changing parameters or parts of the model. What-if scenarios can be conveniently studied by changing parts of the model or subsets of the model parameters, e.g. the effect of changing the unit to purely elective surgery or adding an extra porter. The model can be animated, which helps illustrating the model.

CONCLUSION Simulation may assist management and surgeons in gaining insight in to the complexity of a surgical unit. In a field with focus on efficiency and increased patient throughput simulation based decision making can be a highly efficient tool.

DOES OSTENE™ IMPROVE BONE HEALING COMPARED WITH BONE WAX AFTER STERNOTOMY?

Rikke Vestergaard, Henrik Jensen, , Stefan Vind-Kezunovic, Christian Abildgaard Hansen, Thomas Vestergaard Jakobsen, Kjeld Søballe, J. Michael Hasenkam

Dept. of Cardiothoracic & Vascular Surgery and Institute of Clinical Medicine, Ortopædkirurgisk Forskningslaboratorium, Århus Universitetshospital

INTRODUCTION: Bone wax is used in cardiac surgery to reduce intraoperative bleeding by applying it to the spongiosa after sternotomy. However, Bone wax is non-absorbable and stays in the wound reducing bone healing. To solve this problem a new biocompatible, absorbable hemostatic agent (Ostene™) was introduced, which is claimed not to reduce bone healing Ostene™.

MATERIAL AND METHODS In total 24 Danish Landrace/Yorkshire pigs a midline sternotomy was performed. The pigs were allocated to three study groups; Bone wax, Ostene™, or Control (no treatment). After one hour of sterile exposure to open air, the sternum was closed using steel wires, a stainless steel screw through the two first costae and finally sub- and intracutaneous skin sutures. Six weeks later the animals were euthanized and their sternum removed for pQCT-scans to assess bone density (mg/ccm) as a measure of bone healing.

RESULTS Bone density in the Ostene™ group (277 ± 31 mg/ccm) was significantly higher compared to the Bone wax group (122 ± 36 mg/ccm), but no statistically significant difference ($p=0.9$) was found between the Ostene™ group and Control group (280 ± 61 mg/ccm).

CONCLUSION Ostene™ did not reduce bone healing after sternotomy and showed significantly improved bone healing compared to Bone wax.

VITALISATION OF PERACETIC ACID-TREATED BONE ALLOGRAFT WITH HUMAN MESENCHYMAL STEM CELLS

Maik Stiehler, F Philip Seib, Peter Bernstein, Anja Goedecke, Martin Bornhäuser, Klaus-Peter Günter

Orthopaedic Research Laboratory, Department of Orthopaedics, Aarhus University Hospital; Department of Orthopaedics, University Hospital Dresden, Germany; Leibnitz Institute for Polymer Research and Max Bergmann Center for Biomaterials, Dresden, Germany; Medical Clinic I, University Hospital Dresden, Germany

INTRODUCTION: Sterilized bone allograft as an alternative to autologous bone graft carries the risk of graft failure due to lack of osteoinductivity. The aim of this study was to vitalize bone allograft with human mesenchymal stem cells (MSCs) under GMP-conform conditions. For this purpose we investigated proliferation, osteogenic differentiation and large-scale gene expression of human MSCs cultured three-dimensionally on peracetic acid (PAA)-treated spongy bone chips.

MATERIALS AND METHODS: MSCs were isolated from healthy donors (N=5) and seeded onto PAA-treated spongy bone samples (~5x5x5 mm, DIZG, Germany) under GMP-conform conditions. Proliferation, osteogenic differentiation, and morphology were assessed. RNA was isolated and microarray analysis was performed using the PIQOR Stem Cell Microarray system (Miltenyi Biotec) including 942 target sequences.

RESULTS: Increasing cellularity was observed during the 42 d observation period, while cell-specific ALP activity peaked at day 21. Effective proliferation and adhesion of human MSCs on PAA-treated spongy bone was confirmed by histology, SEM, and CLSM. Gene expression of early, intermediate, and late osteogenic marker genes was present during 42 d of cultivation. Microarray analysis of MSCs cultivated on bone allograft versus 2-D tissue culture demonstrated temporal upregulation of genes involved in extracellular matrix synthesis, osteogenesis and angiogenesis.

CONCLUSION: PAA-treated spongy bone allograft is a biocompatible carrier matrix for long-term ex vivo cultivation of MSCs as observed by favorable proliferation, cell distribution, gene expression profile, and persisting osteogenic differentiation. GMP-grade vitalisation of bone allograft with autologous MSCs represents a promising clinical application for the treatment of osseous defects.



DANSK ORTOPÆDISK SELSKAB
Danish Orthopaedic Society

Bestyrelsen

EFORT Visiting Fellowships – Skal du en 2-4 uger ud i Europa??

Bestyrelsen har besluttet at dansk ortopædi skal være mere synlig i det europæiske forum. Der er mange veje til det – en af dem er at tilbyde yngre, aktive ortopæder et 2-4 ugers ophold på en ortopædkirurgisk afdeling et sted i Europa – næsten efter eget valg.

Hvis du er færdig med din ortopædkirurgiske hoveduddannelsesforløb – og i gang med specialiseringen, og under 40 år, er du kandidat til et EFORT Visiting Fellowship.

EFORT og DOS støtter dig med dine rejseudgifter, din afdeling skal give dig fri med løn til opholdet, medens den afdeling du besøger betaler kost og logi.

Du kan læse meget mere om EFORT Visiting Fellowship på EFORT's hjemmeside www.efort.org.

Motiveret ansøgning fremsendes til DOS's bestyrelse (sekretæren). Deadline 1. juni 2008. DOS kan kun sende én kandidat af sted årligt.

På vegne af bestyrelsen

*Per Kjærsgaard-Andersen
Næstformand*

Dansk Selskab for Håndkirurgi

I forbindelse med DOS forårsmøde
Aalborg d. 8. maj 2008, 9:00 – 12:00.

Tema: Håndens infektioner. Fokus på anvendelse af antibiotika.

09.00 – 09.05 **Velkomst**

Michael Ulrich-Vinther, Marianne Nygaard Wulff og Bent Lange

09.05 – 09.30 **Introduktion**

Overlæge **Bente Gahrn-Hansen** og professor **Henrik Carl Schönheyder**

09.35 – 10.20 **Antibiotika profylakse ved akutte håndkirurgiske traumer**

Overlæge **Leif Juhl Jensen**, Håndkirurgisk Sektor, Aarhus Sygehus *versus* Afdelingslæge **Lasse Bayer**, Håndkirurgisk Sektion, Rigshospitalet, i debat med mikrobiologer

10.20 – 10.50 **Kaffepause**

10.50 – 11.20 **Antibiotika profylakse ved elektive håndkirurgiske procedurer**

Overlæge **Tune Ipsen**, Håndkirurgisk Sektion, Odense Universitetshospital *versus* overlæge **Kirstin Petersen**, Håndkirurgisk Sektion, Kolding sygehus, i debat med mikrobiologer

11.25 – 11.50 **Behandling af (akutte og kroniske) håndkirurgiske infektioner**

Overlæge **Poul Verner Madsen**, Håndkirurgisk fagområde, Aalborg Sygehus *versus* overlæge **Søren Larsen**, Håndkirurgisk Sektion, Odense Universitetshospital, i debat med mikrobiologer

11.55 – 12.00 **Afrundning**

Michael Ulrich-Vinther, Marianne Nygaard Wulff og Bent Lange

Michael Ulrich-Vinther
Afdelingslæge, lektor, dr.med.

Marianne Nygaard Wulff
1. Reservelæge, Ph.D.



Forårsmøde og Generalforsamling

**I forbindelse med DOS forårsmøde i Aalborg d. 8. maj
Kl. 10.00 – 12.30 på Aalborg Kongres og Kulturcenter.**

Forårsmøde:

- 10.00 – 10.15 Kaffe og rundstykker
10.15 – 10.30 ACL-databasen, status og præsentation af ny styregruppe v/ Martin Lind
10.30 – 11.00 Hoftelandsartroskopi. Status i DK, samt erfaringer fra studieophold i Steadman-Hawkin Clinic v/ Bent Lund
11.00 – 11.15 Hoftelandsartroskopi – et nyt subspecialt under SAKS. Database og styregruppe v/ Anders Troelsen
11.15 – 11.30 ACL og børn v/ Svend Erik Christiansen

Generalforsamling – dagsorden ifølge vedtægter:

11.30 – 12.30

- a) Valg af dirigent.
- b) Fremlæggelse og godkendelse af bestyrelsens beretning.
- c) Fremlæggelse og godkendelse af revideret regnskab.
- d) Vedtagelse af kontingent.
- e) Optagelse af nye medlemmer.
- f) Valg af bestyrelsesmedlemmer.
- g) Valg af revisor.
- h) Indkomne forslag.
- i) Eventuelt.

For detaljer under de enkelte punkter, se hjemmesiden www.saks.nu

Bestyrelsen

Den danske FAI og hofteartroskopi database

Databasen præsenteres ved **DOS forårsmøde** i forbindelse med **generalforsamlingen i SAKS**.

Databasen er et tiltag som gælder: 1) alt FAI (femoroacetabular impingement) kirurgi – åbent og artroskopisk, og 2) artroskopisk hoftekirurgi generelt. Formålene med databasen er at monitorere og udvikle kvaliteten af den udførte kirurgi samt at sikre en dansk baseret forskningsaktivitet med henblik på at optimere behandlingstilbuddene.

Et høringsmateriale med uddybning af databasens indhold er tilgængeligt på DOS hjemmeside, samt via SAKS' og DSHK's hjemmesider. Alle interesserede opfordres til at kommentere materialet med henblik på at være med til at forme det endelige indhold af databasen. Se instruktioner for dette i høringsmaterialet.

Vi håber, at alle interesserede vil møde op ved præsentationen, således at databasen kan få den bedst mulige start.

På vegne af databasens styregruppe,

Anders Troelsen, Århus Sygehus.

Øvrige medlemmer:
Bent Lund,
Alma B. Pedersen,
Kjeld Søballe,
Steffen Jacobsen.

DSHK SYMPOSIUM

Dansk Selskab for Hofte og Knæalloplastikkirurgi
Torsdag den 08. maj 2008 kl. 09:45-11:15
Aalborg Kongres & Kultur Center

Total knæalloplastik og funktion

Moderator: Henrik Husted

Program

09.45: Præsentation og velkomst

09.50: High-flex knæ: bedre funktionelt udkomme end "standard"-knæ?

JA Kristian Stahl Otte (10 min)

NEJ Anders Odgaard (10 min)

10.20: Roterende platform: bedre funktionelt udkomme end fixed bearing?

JA Claus Munk Jensen (10 min)

NEJ Claus Emmeluth (10 min)

10.50: MIS: bedre funktionelt udkomme end standard approach?

JA Per Wagner (10 min)

NEJ Christian Petersen (10 min)

Symposiet vil vare ca. 1½ time, kl. 11.15 vil der være pause og dernæst starter:

11.30 – 12.00: **Generalforsamling i henhold til vedtægter**

Henrik Husted
DSHK



SAKS

DANSK SELSKAB FOR ARTROSKOPISK
KIRUGI OG SPORTSTRAUMATOLOGI

Afholder:

10. Basiskursus i artroskopisk kirurgi

Tid: Tirsdag d. 27. maj – torsdag d. 29. maj 2008.

Sted: Panum Institutet, København.

Indhold: 3 dage med teori, undersøgelsesteknik og praktiske øvelser på kadavere med artroskopi og dissektion. Der er afsat 1 dag til teori, og 2 dage til praktiske øvelser.

Målgruppe: Yngre læger som sigter på en speciallægeanerkendelse i ortopædkirurgi. Der kan maksimalt optages 2 kursister pr. artroskopisk søjle. Tildeling af pladser foregår efter princippet ”først til mølle”.

Undervisere: Danske speciallæger med stor erfaring i artroskopisk kirurgi.

Deltagerafgift: For medlemmer af SAKS: 1.700 kr. For ikke medlemmer af SAKS: 2.100 kr.

Tilmelding: Foretages on-line på SAKS’ hjemmeside, www.saks.nu. Tilmelding gælder fra betalingsdato, og sidste frist er 1. maj.

Kursusledelse: Overlæge Marianne Backer og overlæge Torsten Warming.

For yderligere information kontakt: Torsten Warming, ort.kir.afd. M Bispebjerg Hospital, e-mail: warming@dadlnet.dk



DANSK SELSKAB FOR ARTROSKOPISK
KIRUGI OG SPORTSTRAUMATOLOGI

Symposium

”Foot- and Ankle Arthroscopy”

Hotel Comwell, Roskilde, d. 18. – 19. september 2008

Foreløbigt program:

- 1: Achilles tendon problems.
- 2: Anterior ankle impingement.
- 3: Treatment of osteochondral ankle defects.
- 4: Hindfoot endoscopy.
- 5: Endoscopic calcaneoplasty.

Til symposiet vil være internationalt kendte foredragsholdere, og det faglige niveau vil være højt. Blandt andre har C. Niek van Dijk givet tilsagn om at komme.

Sæt allerede nu kryds i kalenderen, og følg med på SAKS's hjemmeside www.saks.nu hvor mere detaljeret program følger, og hvor der vil blive on-line tilmelding.

NB! SAKS tilbyder 10 ”fripladser” (2 fra hver region) til yngre medlemmer af SAKS i hoveduddannelsesstilling eller fase 3 til Symposiumet. Ansøgning vedlagt CV stiles til Bestyrelsen og sendes til SAKS's sekretær.

Bestyrelsen

Rigshospitalets 5. Traumekursus

6. - 7. oktober 2008

Gæsteforelæsere

“Abdominal Trauma“
Tina Gaarder ph.d.
Head of Section for Multitraumatized
Division of Surgery
Ullevål University Hospital, Oslo

“Early Total Care vs. Damage Control”
Prof. Dr. Johannes Rueger
Direktor der Klinik für
Unfall- Hand- & Wiederherstellungschirurgie
Universitätsklinikum Hamburg-Eppendorf

“Education & Team Training”
Torben Wisborg
Head of the dpt of Acute Medicine
Hammerfest Hospital
co-founder of BEST



Traumemekanismer, præhospital behandling, modtagelse og behandlingsprincipper, logistik, traumeteam, monitorering, hjertestop-behandling, billeddiagnostik, teamtræning, luftvejshåndtering, maxillofaciale traumer, nødtracheotomi, thorax traumer, abdominale traumer, hoved-traumer, "damage control surgery", fraktur af ekstremiteter-pelvis-columna, tilskadekomst af børn, brandsår, transfusionsstrategi-væskebehandling-koagulopati

***Ansøgning om optagelse på kurset
sker via hjemmesiden
www.rh-traumekursus.dk***

Fellowship in Shoulder and Elbow Surgery,

**working with Mr Lars Neumann, City Hospital Campus,
University Hospitals, Nottingham, United Kingdom**

This fellowship, which is co-sponsored by Smith+Nephew is an exciting opportunity to work in a busy University Hospital in a Unit with an international reputation, specialised exclusively in Shoulder and Elbow surgery. The Fellow will have the opportunity, either as assistant or surgeon, to participate in over 600 elective arthroscopic and open procedures during the one-year term of the Fellowship. There will also be opportunities to carry out research. The successful applicant should have completed his/her general orthopaedic training, wanting to develop a subspecialist expertise in Shoulder and Elbow surgery.

Further details of the Fellowship, salary, timetable and a copy of the 2007 Fellow's report with a list of procedures performed, together with the contact details of the 2007 Fellow is available on request.

Help and advise on how to obtain UK registration, finding accommodation, managing the move to the UK etc, will be provided.

Applications are currently being accepted for 2008-2010, with the next post starting August 1st 2008, for one year.

EU and EEA medical candidates can transfer their general and specialist accreditation to the UK, further information on UK medical registration can be found on the General Medical Council's website.

Application, with a full CV, operation list and names of three referees to:

Mr Lars Neumann, FRCS(Ed)

Consultant Orthopaedic Surgeon, Nottingham University Hospitals
City Hospital Campus, Hucknall Road, Nottingham, NG5 1PB, UK
Phone: +44-115-9691169, x 57106, E-mail: larsneumann@rcsed.ac.uk

DEADLINE FOR APPLICATION: 12TH MAY 2008

9th EFORT Congress

29 May – 1 June 2008, Nice, France

The scientific programme includes symposia and instructional Course lectures delivered by distinguished speakers from all across Europe, free papers, e-posters, workshops, controversy case discussions, meet the expert sessions (ExMex) and industry exhibits. **The highlights of this all-round scientific programme** are the following topics:

- The Complex Arthroplasty
- Osteoporosis and Fragility Fractures
- Inflammation
- Trauma
- The difficult Spine
- Paediatric Update in Orthopaedics
- The Foot: New developments

As mentioned above, as a component of the scientific programme, **we will innovate in Nice six different “ExMex” (Expert Meets Expert) sessions** to topics such as

- Spine Fixation techniques
- Fragility Fractures
- The New Arthroplasties
- Mid and hind Foot Arthrosis
- Fractures in Children: tricks and hints
- Upper Extremity

On our website: www.effort.org you can:

- **Sign up for this congress** (as of August 15th)
- **Find more information about the Congress and EFFORT Instructional Courses**

We look forward to welcoming you to Nice in May 2008!

For the EFFORT Executive Committee

Prof. Karl-Göran Thorngren

For the Local Organizing Committee

Prof. Therry Bégué

SICOT Triennial World Congress

Hongkong 24-28 august 2008

Søg om medlemskab og opnå billig registrering mm. hos den danske nationale delegat: Ovl dr.med. Ebbe Stender Hansen (esten@as.aaa.dk) Aarhus Sygehus eller hos undertegnede (cbung@as.aaa.dk)

SICOT er den eneste globale ortopædiske organisation med medlemmer fra mere end 100 lande. Organisationen fokuserer på forskning, videnskabelig udvikling og postgraduat uddannelse indenfor ortopædi og traumatologi. Organisation har affilierede videnskabelige selskaber fra alle subspecialer på højeste specialiserede niveau, men bruger ligeledes store ressourcer på uddannelse i udviklingslandene. Opbyg dit internationale netværk og oplev et nyt perspektiv i din uddannelse og arbejde. Besøg hjemmesiden og få yderligere information.

Cody Bünger
President Elect SICOT