

DOS BULLETIN



NR. 3

MARTS 2005

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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 skal ske skriftligt eller via DOS's hjemmeside www.ortopaedi.dk, anmodningen skal stiles til bestyrelsen og indsendes sammen med oplysninger om personlige data til sekretæren Bjarne Møller-Madsen.

DOS-Bulletin

Udgiver

Dansk Ortopædisk Selskab

Ansvarshavende redaktør

Michael Nielsen

Web-page

www.ortopaedi.dk

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DEADLINES FOR NÆSTE BULLETIN

ANNONCER: Fredag den 6. maj 2005

TEKST: Fredag den 20. maj 2005



DOS Forårsmøde 2005

**12. - 13. maj
Aalborg Kongres & Kulturcenter**

Klinik Aalborg ved Ortopædkirurgi Nordjylland har nu atter æren af at være vært ved Dansk Ortopædisk Selskabs Forårsmøde, som i år finder sted torsdag den 12. og fredag den 13. maj 2005.

Vi ser frem til at kunne byde jer velkommen til et fyldigt videnskabeligt program med interessante symposier, spændende foredrag og oplysende postere, en omfattende og inspirerende udstilling fra vores samarbejdspartnere samt en underholdende og munter gallamiddag med efterfølgende dans til tonerne af Søren Kaalund og band.

Vi håber på stort fremmøde, og på vegne af alle læger i Klinik Aalborg byder jeg jer hjertelig velkommen.

Hans Peter Jensen

Annonce

Ledsagertur

Det er os en stor glæde at kunne invitere dig på den traditionelle ledsagertur fredag den 13. maj 2005. Turen foregår i et afslappet tempo, og vi lægger vægt på, at alle får en hyggelig dag, hvor hovedtemaet er inspiration til dig selv og dit hjem.

Program for dagen

- kl. 10.45 Vi mødes i forhallen ved Aalborg Kongres & Kulturcenter.
- kl. 11.00 En taxa bringer os til Georg Jensens udstillingslokaler, hvor indehaveren vil fortælle os om de forskellige bordopstillinger og spændende tekstiler.
- kl. 12.00 Vi spiser frokost i Aalborgtårnet, som er på benene igen efter en omfattende renovering. Under frokosten har vi en formidabel udsigt over Aalborg, Nørresundby og Limfjorden. Frokosten består af kold glaceret skinke m/melon, asparges, salat og flûtes, lune frikadeller og kartoffelsalat samt kaffe og chokolade. Dertil serveres en øl, en vand eller et glas vin.
- kl. 13.00 Efter frokosten besøger vi Restaurant Skydepavillonen, hvor autoriseret kosmetolog Karina Christiansen fra KC Beauty vil give os gode råd om hudpleje og vise os, hvordan vi bedst lægger en make-up. Vi vælger et par stykker iblandt os, som får lagt make-up af Karina.
Fra Skydepavillonen kan vi nyde udsigten over skov eller by, og vi får serveret kaffe og lun tærte, mens Karina underholder.
- kl. 15.00 Dagen er slut, og vi går fra stedet. Der er ca. 10 minutters gang til Aalborg Kongres & Kulturcenter.

Deltagelse er gratis!

For at gennemføre arrangementet skal der være mindst 10 tilmeldte. Tilmelding sker via Hjemmesiden: www.ortopaedi.dk

Hans Peter Jensen

Mødeoversigt

Torsdag 12.05.05

Room A	Room B
12:00 - 13:00 Frokost	
13:00 - 14:00 Børneortopædi <i>Chairman: Søren Harving</i>	13:00 - 14:00 Ekspérimentel ortopædi <i>Chairman: Ebbe S. Hansen</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 frokosterne,
men ikke til middagen.**

Frokostbilletterne skal afleveres til betjeningen.

Mødeoversigt

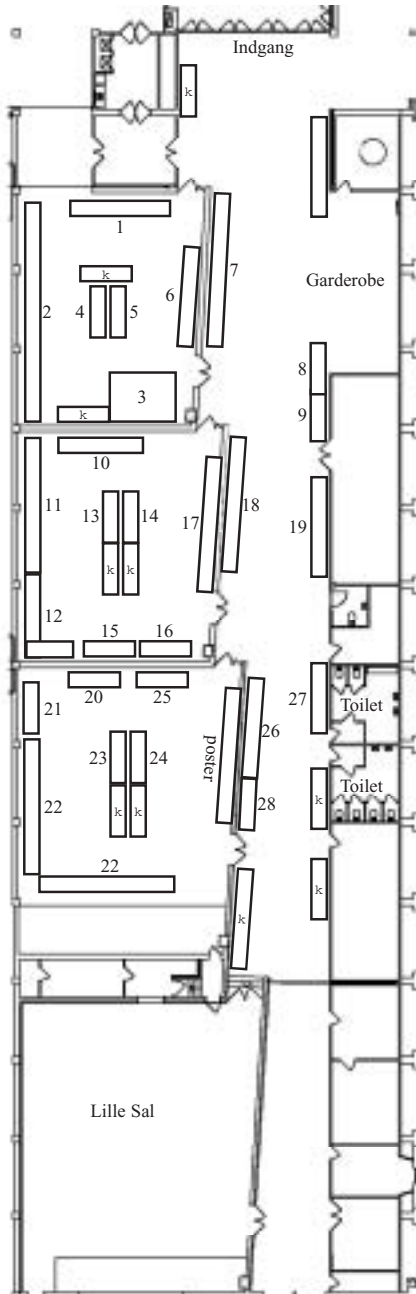
Fredag 13.05.05

Room A	Room B
09:00 - 10:30 Symposium : “Dese vs.discprotese”. Et paradigmeskift i rygkirurgi? Interessegruppen for rygkirurgi	
10:30 - 11:30 Kaffe og Udstilling	
11:30 - 12:30 Traumatologi Chairman: Klaus Kjær Petersen	11:30 - 12:30 Frie foredrag Chairman: Knud Stenild Christensen
12:30 - 13:30 Frokost	
13:30 - 14:30 DOS – Honorary Lecture: “Biokompatibilitet og Nanoscience” Prof. Flemming Besenbacher	
14:30 - 15:30 Kaffe og Udstilling	
15:30 - 17:00 Alloplastik Chairman: Poul T. Nielsen	15:30 - 17:00 Postersession: Chairmen: Cody Bünger, Søren Kaalund, Martin Lind

Udstillere

<i>Udstiller</i>	<i>Stand nr.</i>	<i>Areal</i>
Aircast Scandinavia AB	14	1 x 3 m
Allergan A/S	21	1 x 3 m
B. Braun Medical /Aesculap	4	1 x 3 m
Biomet Danmark	2	1 x 12 m
dj Orthopedics Nordic ApS	13	1 x 3 m
Fischer Medical	5	1 x 3 m
GlaxoSmithKline Pharma A/S	6	1 x 6 m
Hemax Medical ApS	20	1 x 3 m
Implantec Medical ApS	25	1 x 3 m
Karl Storz – Endoskopi Danmark A/S	3	3 x 4 m
KEBO MED	1	1 x 6 m
LJ Medical	26	1 x 6 m
Medtronic-ViCare AS	8	1 x 3 m
Merck Sharp & Dohme	23	1 x 3 m
NMS ENDO	10	1 x 5 m
NMS OP	12	1 x 7 m
NMS ORTO	11	1 x 8 m
Ortotech	19	1 x 6 m
Osmedic ApS	27	1 x 4 m
Pro-Meduc A/S	9	1 x 3 m
Protesekompagniet	22	1 x 16 m
Smith & Nephew A/S	17	1 x 8 m
Sportspharma Ortosupport ApS	16	1 x 3 m
Stryker Danmark	7	1 x 9 m
Swemac Orthopaedics AB	24	1 x 3 m
Synthes A/S	18	1 x 8 m
Verigen A/S	28	1 x 3 m
Viking Medical Scandinavia	15	1 x 3 m

Udstilling



Dansk Ortopædisk Selskabs Generalforsamling

Torsdag den 12. maj 2005 kl. 15:00
Aalborg Kongres & Kulturcenter

Der indkaldes hermed til Generalforsamling med følgende

DAGSORDEN

- 1) Valg af dirigent
- 2) Formandsberetning
- Udnævnelse af æresmedlem
- 3) Udvalgsberetninger
 - a) Uddannelsesudvalget
 - i) Status for den nye speciallægeuddannelse
 - b) NOF
 - c) Beretning fra arbejdsgrupper og øvrige udvalg
 - i) DOS Traumeudvalg
 - ii) DRG
 - d) Beretning fra Faggrupperne
- 4) Godkendelse af referenceprogram om behandling af ligamentskader i knæet
- 5) Kassererens beretning
 - a) Regnskab
 - b) Kontingent 05 - 06
- 6) Valg
- 7) Dansk Ortopædisk Selskabs Fond
 - a) Regnskab
 - b) Tildelinger
- 8) Eventuelt

Bestyrelsen

Formandens beretning til generalforsamlingen i Dansk Ortopædisk Selskab den 12. maj 2005

Dansk Ortopædisk Selskab har i perioden maj 2004 til maj 2005 igen haft en glædelig fremgang i antallet af medlemmer. og bestyrelsen byder velkommen til følgende nye medlemmer:

Mette Marie Petersen	Stig Dalsgård
Youssef Mohamad Dibaje	Peter Busch
Pia Monica Back	Lars Hansen
Lars Soelberg Vadstrup	Susanne Olesen Schaarup
Henrik Langgaard	Holger Larsen
Tarik Fattah Mohammad	Birthe Pedersen
Per Mikael Nielsen	Carsten Moss Jensen
Morten Ishøj Michelsen	Kristian Guldbæk Bundgård
Krassimir N. Kostadinov	Upender Singh
Samira Naderifar	Nikolaj Rindom
Carsten Bo Perlick	Shahin Behzadi
Heidi Fisker	Thomas Egendal
Jytte Magna Kristiansen	Sami Saleem Muhi Ejam
Xiaodong Ma	Marius Gaurilcikas
Mette Pedersen	Henrik Palm
Signe Harving	Thomas Vester
Anton Kristensen Ulstrup	Ala Aldeen Mohammad R. Al-Khafagi
Behzad Kalali	Zaid Tarik-Jassim Al-Aubaidi
Henrik Kjær Bonderup	Sinan Mouaayad A. Said
Anders Lamberg	Kasper Peiter Jensen
Christian Heine Jensen	Michael Thøger Langergaard
Jeppe Barckman	

Selskabet tæller således nu ca. 765 medlemmer.

Vore medlemmer Troels Barfred, John Cordes, Erik Gert Jensen, Torben Ejasing Jørgensen, Henning Becker-Andersen og Henning Paaby er desværre afgået ved døden.

Selskabets møder:

Selskabet har afholdt de vanlige forårs- og efterårsmøder i henholdsvis Århus og København. Begge møder har været velbesøgte, både til de videnskabelige sessioner, symposierne samt festmiddagene. Der havde forud for ændringen af mødetidspunktet fra fredag/lørdag til torsdag/fredag været rejst bekymring om deltagerantallet, men denne bekymring har været uden grund.

Ved sidste generalforsamling rejstes ønske om, at generalforsamlingen blev placeret om torsdagen i stedet for sidst på fredagen. Bestyrelsen har taget dette til efterretning, og håber at dette tiltag vil få mange af medlemmerne til at møde op til generalforsamlingen.

Der har endvidere både fra enkelte medlemmer samt fra industrien været rejst ønske om, at de 2 årlige møder i selskabet blev erstattet af ét møde evt. af flere dages varighed efter den svenske model. Det er bestyrelsens opfattelse, at det glædeligt store tilbud af videnskabelige foredrag samt de velbesøgte symposier ikke tillader, at selskabet kun afholder ét årligt møde. Det kan endda være svært på de to gange to dage at få plads til alle aktiviteter, og bestyrelsen overvejer at medinddrage en del af onsdagen til bl.a. uddannelsesaktiviteter (workshops) for læger i turnus- og introduktionsstilling. Det store tilbud af aktiviteter kan desuden i fremtiden medføre, at det bliver nødvendigt at arrangere parallelle sessioner ikke blot i foredragssessionerne, men også ved symposierne.

Der har også været fremsat ønske om, at forårsmøderne blev henlagt til andre byer end Århus, Odense og Ålborg. Af hensyn til mødets mange deltagere, herunder den meget store udstilling, er dette ikke muligt. Bestyrelsen ønsker at holde udstillingerne så samlet som muligt, og der er ikke andre kongrescentre, som kan stille faciliteter tilsvarende dem, vi har nu, til rådighed.

DOS Honorary Lecture blev ved forårsmødet i Århus afholdt af den nytiltrådte professor i Odense, Søren Overgaard.

Guildalforelæsnings blev afholdt i oktober af Dr. Thomas Thornhill, Boston. Begge forelæsnings var spændende og velbesøgte.

Selskabet har endvidere afholdt symposier om tromboseprofylakse og osteoporose. Bestyrelsen takker arrangørerne for deres store indsats ved planlægning og afvikling af disse symposier.

Medlemmernes videnskabelige aktivitet er tilsyneladende atter stigende. Bestyrelsen har modtaget et forøget antal abstracts til såvel efterårs- som forårsmødet, og har tilmed været nødsaget til at afvise ellers udmærkede videnskabelige arbejder grundet pladsmangel. Udviklingen er glædelig og sekretæren bestræber sig på, såfremt et abstract må afvises, at begrunde afvisningen, og opfordrer ofte til genfremsendelse til næste møde. Foredrag og postere kan nu kun fremsendes elektronisk, og linket til bestyrelsen bliver lukket ved fristens udløb. Det kan være ærgerligt for medlemmerne, men fristen er lang, og man kan faktisk allerede nu tilmelde foredrag til efterårsmødet i oktober.

Postersessionen vil fortsat blive prioriteret højt, og bestyrelsen vil til forårsmødet anmode posterforfatterne om at opholde sig ved deres poster den første halve time af hver kaffepause, således at diskussion med medlemmerne bliver mulig.

Dansk Ortopædisk Selskab kan til efteråret fejre 60 års jubilæum. Bestyrelsen vil bestræbe sig på at gøre efterårsmødet, og herunder ikke mindst festmiddagen, til noget særligt. Reservér allerede nu den 27. og 28. oktober 2005.

Bestyrelsens møder:

Bestyrelsen holder møde ca. 1 gang om måneden, og afholder desuden et årligt internatmøde med uddannelsesudvalget samt møde med repræsentanter for de ni fagområder.

Referater fra såvel disse møder som bestyrelsens møder er nu tilgængelige på selskabets hjemmeside, og medlemmerne opfordres til at holde sig løbende orienteret om selskabets aktiviteter. Hjemmesiden har fået et nyt og brugervenligt layout med nyttige links til både fagområder og den internationale ortopædi, og formanden skal her benytte lejligheden til at takke kassereren Klaus Hindsø for hans arbejde som web-master med etablering og vedligeholdelse af Hjemmesiden.

DOS Bulletinen:

DOS Bulletin udkommer som tidligere 6 gange om året, men kan også læses elektronisk på selskabets hjemmeside (www.ortopaedi.dk). Det er bestyrelsens indtryk, at Bulletinen læses flittigt af medlemmerne, og redaktionen modtager gerne indlæg fra medlemmerne, som hermed opfordres til at deltage i debatten om dansk ortopædi.

Referenceprogrammer:

Ved generalforsamlingen sidste år vedtoges referenceprogrammet vedrørende knæalloplastik, og der var ved efterårsmødet en velbesøgt høring om referenceprogrammet om knæets ligamentskader. Sidstnævnte program er på dagsorden med henblik på vedtagelse ved dette års generalforsamling. Bestyrelsen vil fortsat initiere udarbejdelsen af ét referenceprogram hvert år, og Dansk Selskab for Hofte- og Knæalloplastik arbejder p.t. med en revision af hoftealloplastikprogrammet, således at der kan gennemføres en høring af dette i forbindelse med efterårsmødet. I forbindelse med vedtagelsen af knæalloplastikprogrammet har bestyrelsen diskuteret økonomien omkring evt. publikation af disse programmer. Trykning af et sådant program koster i størrelsesorden 40.000 kr., og bestyrelsen har valgt ikke at sponsorere publikationen, men opfordrer styregrupperne til at skrive en oversigtsartikel, som kan publiceres i Ugeskrift for Læger. Det er bestyrelsens fornemmelse, at referenceprogrammerne anvendes hyppigt af såvel medlemmer som andre, men der er et hurtigt link på selskabets hjemmeside til alle referenceprogrammerne, og bestyrelsen finder denne publikationsform mere praktisk anvendelig. Forfatterne til referenceprogrammerne lægger et meget stort og uhonoreret arbejde i udarbejdelsen af disse uundværlige værktøjer, og skal hermed modtage bestyrelsens tak herfor.

Inspektorordningen:

Adskillige af selskabets medlemmer deltager i Sundhedsstyrelsens inspektorordning. Både de afdelinger, som får inspektorbesøg, og inspektorerne udfører et stort arbejde med denne ordning. Det har knebet med aflevering af enkelte rapporter, men Sundhedsstyrelsen arbejder nu med et mere enkelt system til rapportering, som skulle lette inspektorernes arbejde, og der bliver nu udgivet en Inspektorvejledning. Enkelte andre videnskabelige selskaber har medinddraget yngre læger i inspektorordningen. Bestyrelsen finder, at dette er et godt tiltag, og har anmodet Uddannelsesudvalgets yngre-læge repræsentant, om at finde et antal yngre læger, som er tidligt i deres hoveduddannelse til at deltage i dette arbejde.

Ikke alle inspektioner er faldet tilfredsstillende ud for den inspicerede afdeling. Bestyrelsen har ingen sanktionsmulighed over for sådanne afdelinger, idet opsynet med uddannelsen i de enkelte afdelinger påhviler De Regionale Uddannelsesråd.

De faglige bedømmelsesudvalg:

Som bekendt er den tidligere § 14 bedømmelse nu erstattet af en udtalelse fra en række ”bedømmere” udpeget af bestyrelsen efter indstilling fra fagområderne. Der er søgt en bred repræsentation inden for de enkelte ”subspecialer”, og med repræsentation af alle regioner. Bestyrelsen er blevet gjort opmærksom på, at bedømmerne væsentligst kommer fra universitetssygehusene, hvilket var utilsigtet. Bestyrelsen har opfordret fagområderne til ved kommende indstillinger også at tilgodese vore højt kvalificerede kolleger udenfor universitetssygehusene.

Registrene:

Knæ- og hoftedatabaserne fungerer tilfredsstillende og antallet af tilbagemeldinger fra afdelingerne er højt. Dansk Hoftedaloplastikregister kan fejre 10 års jubilæum til efteråret. Dette vil blive markeret med et symposium ved efterårsmødet. Det er glædeligt dels at se, at resultaterne af afdelingernes produktion ligger på højde med, hvad andre lande kan præstere, og også at der fra hoftedatabasen begynder at fremkomme afledte videnskabelige publikationer.

Begge disse registre vil nu blive placeret i Kompetencecenter Vest, således at de fysisk kommer ”under samme tag” som de tre ”yngre” ortopedkirurgiske registre vedr. Ganz-osteotomi, skulderalloplastik og korsbånd. Desuden indrapporteres til Dansk Diskusdatabase i samarbejde med neurokirurgerne.

Fagområderne:

Bestyrelsen har i januar afholdt det årlige møde med repræsentanter for de 9 fagområder. Bestyrelsen prioriterer samarbejdet med fagområderne meget højt, og gør flittig brug af områdernes ekspertise, når der skal besvares forespørgsler fra Sundhedsstyrelsen og andre organisationer. Alle fagområder har nu udarbejdet detaljerede beskrivelser af fagområdet indhold samt en angivelse af kravene til uddannelse inden for området.

Ved ansættelse i overlægestilling er det ikke længere et spørgsmål, om hvor længe man har været ansat i en given stilling under uddannelsen, men snarere om ansøgeren har opnået bestemte kompetencer. Det er vigtigt, at ansøgere til overlægestillinger i deres ansøgning redegør for deres kvalifikationer indenfor de ”syv kompetencer”. Fagområderne har med deres beskrivelse af ekspertområderne bidraget til at bedømmelsen kan kvalificeres.

Det videre arbejde hermed vil blive koordineret af Uddannelsesudvalget og det færdige produkt vil blive tilgængeligt på Hjemmesiden.

DOS Fonden:

DOS Fonden vil igen i år uddele et stort beløb til gavn for den videnskabelige aktivitet. Flere af vore leverandører har valgt at donere betydelige beløb til fonden samt at sponsorere uddannelsesaktiviteter i stedet for de traditionelle julehilsner til medlemmerne. Bestyrelsen finder, at dette er et generøst og godt initiativ, som vil give især vore yngre medlemmer mulighed for at rejse udenlands med henblik på dygtiggørelse og/eller at præsentere egne forskningsresultater.

Ansøgninger til fonden kan fremsendes til bestyrelsen via Hjemmesiden, hvor ansøgningsfrister samt betingelser for at opnå støtte fremgår.

Kirurgisk Forum:

Kirurgisk Forum er et fællesudvalg med repræsentanter for alle ”skærende” specialer, men med størst repræsentation fra Dansk Kirurgisk Selskab og DOS. Kirurgisk Forum mødes to gange årligt, og initierede for flere år siden udarbejdelsen af en fælles traumemanual med beskrivelse af retningslinjer for modtagelsen af hårdt kvæstede patienter. Manualen har ført en hensygnende tilværelse på DKS’ hjemmeside, idet det var tanken at interessenter kunne kommentere rapporten før endelig færdiggørelse. Arbejdet med denne manual er nu genoptaget, og et udvalg med Kjeld Hougaard som formand vil forsøge hurtigt at færdiggøre rapporten, således at den kan blive et brugbart dokument i tilrettelæggelsen af traumemodtagelsen i de kommende regioner. Der vil ved generalforsamlingen blive redegjort for status på dette arbejde.

Kirurgisk Forum har også drøftet den kommende regionalisering, jf. nedenfor.

NOF:

Bestyrelsen deltog i NOF bestyrelsesmødet i Geilo, Norge i maj 2003. Det blev på dette møde indstillet at Holland blev optaget som fuldgyldigt medlem af NOF, og denne beslutning blev stadfæstet ved generalforsamlingen i forbindelse med NOF-mødet i Island, juni 2004. Optagelsen af Holland har medført, at Acta Orthopaedica Scandinavica har ændret navn til Acta Orthopaedica. Generalsekretæren Olle Svensson har desuden stillet forslag om, at også Estland optages som medlem af NOF.

DOS bestyrelsen er usikker på om tiden hertil er moden, og ønsker ved generalforsamlingen medlemmernes mening herom.

Generalsekretæren, som i Island fik forlænget sin embedsperiode med 2 år, skal gå af til NOF mødet i Oslo 2006. Det er Danmarks tur til at indstille en ny generalsekretær, og bestyrelsen vil gerne indstille Bjarne Møller-Madsen til denne post.

Endelig skal bestyrelsen anmode generalforsamlingen om samtykke til at vi indstiller Steen Bach Christensen til æresmedlem af NOF for sit store arbejde som præsident for NOF.

NOF mødet i Island 2004 var meget velbesøgt, og med foredrag af høj videnskabelig kvalitet.

NOF afholder bestyrelsesmøde i Danmark juni 2005, og DOS bestyrelsen vil være værter. Bestyrelsen arbejder på ved denne lejlighed også at arrangere et fællesmøde med Acta-styret.

EFORT:

DOS har støttet deltagelse i EFORT Travelling Fellowship og vil også i fremtiden gøre dette. Efortmødet 2005 afholdes i Lissabon 4. – 7. juni. Det videnskabelige program er meget stort og medlemmerne opfordres til at deltage. Der er en ledig bestyrelsespost i EFORT og DOS bestyrelse har indstillet Cody Bünger. Valget finder sted ved generalforsamlingen i Lissabon, og deltagende medlemmer af DOS opfordres til at møde frem.

Dansk Medicinsk Selskab (DMS):

DMS er paraplyorganisation for alle de videnskabelige selskaber, og DOS' bestyrelsesmedlemmer er også medlemmer af DMS' repræsentantskab. Selskabet har fået ny bestyrelse, og denne ønsker at profilere DMS som lægernes overordnede videnskabelige selskab. DOS bestyrelse støtter denne holdning og vil søge at få indflydelse på bl.a. DMS' råd for forskning. DMS er også høringspartner i overvejelserne omkring strukturreformen, og det er bestyrelsens opfattelse, at danske ortopæder bør søge indflydelse i Dansk Medicinsk Selskab.

Strukturreformen:

Det administrative arbejde med strukturreformen er i fuld gang, og formanden for Lægeforeningen har i en leder i Ugeskrift for Læger opfordret til at man søger faglig rådgivning hos de videnskabelige selskaber.

Dette spørgsmål har blandt andet været drøftet i Kirurgisk Forum, men der er ingen af de skærende specialer, der har modtaget nogen opfordring til at yde en sådan rådgivning. I enkelte amter (bl.a. Viborg) har ortopæderne selv taget initiativet til at arrangere møder med bl.a. administrato-
rer og politikere. DOS bestyrelse vil forsøge at arrangere et symposium med regionaliseringen og den fremtidige ortopædi i Danmark som emne. Det nærmere indhold og tidspunktet for et sådant symposium er i skrivende stund ikke på plads, men bestyrelsen skal indtrængende opfordre medlemmerne i de enkelte regioner til at drøfte den fremtidige organisering af ortopædien. Tiden løber og hvis ingen spørger ortopæderne må vi selv, både regionalt og centralt tage initiativet.

Som afslutning på denne formandsberetning skal jeg hermed takke alle de medlemmer, som utrætteligt har medvirket til at højne standarden af vort fag, via fagområder, registre, udvalg og ikke mindst mine kolleger i bestyrelsen. En særlig tak til vor afgangende kasserer Klaus Hindsø, som udover at holde styr på selskabets finanser har ydet et enormt arbejde med det praktiske arrangement af vore møder og tilmed har fungeret som selskabets web-master.

Sidst men ikke mindst håber jeg at det frugtbare og gode samarbejde med vore leverandører fortsætter.

Den skriftlige formandsberetning er afsluttet den 4. marts 2005.

Søren Solgaard

Formandens skriftlige beretning for Uddannelsesudvalg, Dansk Ortopædisk Selskab Generalforsamlingen d. 12. maj 2005, Aalborg

I forbindelse med sidste generalforsamling afgik *Karsten Thomsen*, mens *Finn Bjarke Christensen* blev valgt.

Udvalget konstituerede sig herefter:

Søren Overgaard, formand og ansvarlig for målbeskrivelser

Marianne Breddam, A-kursus-ansvarlig

Claus Hjorth Jensen, CME-ansvarlig og UEMS-repræsentant

Finn Bjarke Christensen, E-kursus-ansvarlig

Michael Nielsen, bestyrelsesrepræsentant

Sajida Afzal, kursist-repræsentant

Micael Haugegaard fortsatte som hovedkursusleder og har deltaget i udvalgets møder. Mødereferater findes på DOS' hjemmeside.

Speciallægeuddannelse

Målbeskrivelse for den nye speciallægeuddannelse blev i efteråret 2003 godkendt af Sundhedsstyrelsen. Herefter blev vores portefølje godkendt i foråret 2004. Begge dokumenter kan hentes via vores Hjemmeside (www.ortopaedi.dk). Porteføljen er et registrerings dokument, der skal sikre at specifikke kompetencer erhverves sammen med en række andre formål (se porteføljen). Der arbejdes centralt på en elektronisk registrering til anvendelse indenfor alle specialer.

Der er sket mindre justeringer af målbeskrivelsen. Laparotomi kompetencen er taget ud af hoveduddannelsen. Ændringer opdateres via Sundhedsstyrelsen 2 gange årligt.

De første læger blev ansat i de nye hoveduddannelsesstillinger per 1. august 2004. Der har allerede været forespørgsler til Uddannelsesudvalget omkring ændringer af uddannelsesforløbene. Kompetencen til ændring af forløbene ligger ikke i DOS-regi, men lokalt i Videreuddannelsessekretariatene. Det er vores opfattelse at man bør arbejde for at de

uddannelsesforløb der er vedtaget, bliver succesfulde med mindre der viser sig åbenlyse problemer. Der kan senere blive behov for ændringer, når der findes et ordentligt grundlag for at evaluere de forskellige forløb på.

Forskningstræningen har lidt en hård skæbne. Amdtsrådsforeningen og Finansministeriet har ikke villet bevilge midler til mere end svarende til 20 hverdage heri indregnet tid til kurser. Der bliver derfor behov for at justere målbeskrivelsen på dette punkt, idet den har været planlagt ud fra en 3 måneders periode.

Uddannelse stod for et velbesøgt symposium omkring speciallægeuddannelse i forbindelse med årsmødet.

Specialespecifikke kurser

Der foregår løbende tilpasning af kurserne med henblik bedst mulig teoretisk uddannelse samt undgåelse af overlappingskurserne imellem. Vi har nu planlagt en omlægning af kurserne således at der bliver et kursus indenfor hvert fagområde. Da fagområderne ikke fylder lige meget rent uddannelsesmæssigt i henhold til målbeskrivelsen, vil der blive forskel i kursusvarighed. Fagområderne er inddraget i denne omlægning. Vi regner med at en ny kursusrække kan starte sandsynligvis fra 2006. Vi vil gerne takke alle delkursusledere for deres store arbejde i forbindelse med afholdelse af kurser i 2004 samt ikke mindst alle undervisere.

E-kurser

Der har i det forgangne år været planlagt kurset: "Behandling af osteoporotisk fraktur i columna", men det blev aflyst i forbindelse med udmelding fra Sundhedsstyrelsen omkring vertebroplastik. Herudover har der været afholdt E-kursus omkring revisions hoftealloplastik.

Beskrivelse af fagområderne

DOS har tidligere defineret 9 fagområder: Traumatologi, rygkirurgi, skulder- og albuekirurgi, håndkirurgi, knæ- og hoftekirurgi, børneortopædi, idrætstraumatologi, fod- og ankelkirurgi, tumor-amputations- og infektionskirurgi. I forbindelse med at Sundhedsstyrelsen har ønsket at udpege fagspecifikke personer til bedømmelse af ansøgere til overlægestillinger, har vi fundet det væsentligt at hvert fagområde beskrives bort-

set fra tumor-, amputations- og infektionskirurgi. Fagområderne har udarbejdet disse beskrivelser der nu er under revision med henblik på harmonisering. Vejledning til beskrivelse af fagområderne kan findes på vores Hjemmeside. Beskrivelsen skal kunne anvendes af den uddannelsessøgende, den uddannelsesgivende, og af bedømmere i forbindelse med vurdering af ansøgere til overlægestillinger/speciallægestillinger indenfor specifikt fagområde.

Rekruttering

Til de sidste to ansøgningsrunder til hoveduddannelsesstillinger har der været tilfredsstillende ansøgerskarer: henholdsvis 43 til 17 stillinger samt 24 til 16 stillinger.

Vi skal gøre alt for fortsat at rekruttere til vores fag, hvorfor der til årsmødet som noget nyt vil blive arrangeret workshops for turnus- og introduktionslæger.

CME (Continuous medical education)

Der er fortsat ikke krav om CME-registreringen, men opnåelse af 150 point over 3 år, svarende til 150 timer, er internationalt anerkendt. Kurser og kongresser kan fortsat CME akkrediteres af vores CME-ansvarlige. Akkrediteringskatalog kan findes på hjemmesiden.

CME 150 CME point over 3 år er et godt argument overfor vores arbejdsgivere med henblik på at sikre den nødvendig efteruddannelse, der bør være til rådighed for speciallægen.

Søren Overgaard

Valg

Ved DOS Generalforsamling 2005 afholdes valg:

Bestyrelse:

Kasserer Klaus Hindsø er på valg - kan ikke genvælges.
Bestyrelsen indstiller Bo Sanderhoff Olsen til ny kasserer.

Redaktør Michael Nielsen er på valg – Kan genvælges
Ønsker genvalg. Bestyrelsen indstiller til genvalg.

Uddannelsesudvalg:

Marianne Breddam er på valg - Kan genvælges og ønsker genvalg.
Bestyrelsen og uddannelsesudvalget indstiller til genvalg

Kursistrepræsentant Sajida Afzal er på valg – kan ikke genvælges.
Der vælges ny repræsentant blandt de opstillede fra hoveduddannelsen

DOS:

Lægelig revisor Reinar Weeth er på valg – kan ikke genvælges
Bestyrelsen indstiller Klaus Hindsø

Nye kandidater kan tilmeldes i henhold til vedtægterne.

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Et paradigmeskift i rykirurgien?“**

Lumbal fusion - En evidensbaseret behandling

Finn Bjarke Christensen & Cody Bünger

**Lumbal discusprotese. International status og introduktionen
i Danmark**

Thomas Kiær

Cervical discusprotese versus fusion: International status.

Søren Eiskjær

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Først en undskyldning til alle dem der blev snydt for DOS Bulletin nr. 2 – 2005. Vi får vores adresselabels sendt direkte til post-manager. Denne gang fik vi job-adresser i stedet for hjemme-adresser. Alle de medlemmer der har skiftet job uden at få dette registreret hos DADL er blevet snydt for bladet. Man kan læse Bulletin nr. 2 på nettet:
www.ortopaedi.dk

Det bliver svært at nå alle de foredrag man gerne vil til ved Forårsmødet i Aalborg. Både kvalitet og kvantitet er støt stigende for tilmeldte foredrag til DOS møderne.

Generalforsamlingen er nu placeret om torsdagen, men det har været nødvendigt at korte den lidt ned tidsmæssigt for at få plads til et par foredragssessioner inden.

De fleste informationer om det forgangne år og om nogle af fremtidsperspektiverne for DOS kan læses i den udførlige formandsberetning andetsteds her i bladet. Fremhæves skal dog den store donation DOS-Fonden har fået fra Synthes A/S indeholdende løbende 6 pladser på AO – Basic course (næste gang Middelfart 23. – 26. august 05) og 6 pladser på AO – Advanced course (næste gang 10. – 15. september 2005 Helsinki). Donationen dækker både kursusgebyr og ophold, så man skal kun selv finde midler til transporten. Pladserne kan søges i DOS-Fonden og det er alene Fondsbestyrelsen der har indflydelse på fordelingen. Bestyrelsen vil endnu engang takke Synthes.

Det i Bulletin nr. 02 2005 nævnte for-formøde onsdag d. 11. maj 05 omhandlende planlægningen af ortopædien i Danmark efter regionaliseringen er endnu ikke helt på plads. De nøglepersoner vi håber på skal deltage er ikke nemme at få fat i. Vi håber stadigvæk at kunne gennemføre en høring om regionaliseringen ons. 11.05 kl. 16, men nærmere information vil følge. Planlæg dagen og følg med på DOS's hjemmeside.

Bagerst i denne publikation kan man se en annoncering om en ny muskulo-skeletal artikelkonkurrence primært rettet mod medicinstuderende. Det er Pfizer der står bag med ønsket om at øge interessen for og opmærksomheden på bevægeapparatets sygdomme, specielt her i The Bone and Joint Decade. Informationen er hermed givet videre og hvis man har en aktiv studerende i afdelingen, var det en mulighed at give ideen videre. Man skal dog være opmærksom på at bedømmerne giver sig selv lov til ikke at uddele nogen pris (eller give flere) afhængig af kvaliteten på det skrevne.

Vi glæder os til et spændende møde i Aalborg – det plejer at være sjovt.

Red.

Abstracts

Outcome at 10 years after Treatment for Adolescent Idiopathic Scoliosis.

Mikkel Andersen, Steen Bach Christen, Karsten Thomsen

Spine Section, Dept. of Orthop. Surg., University Hosp. of Odense and
Dept. Orthop. Surg., University Hosp. of Copenhagen

INTRODUCTION: The consequences of AIS are predominantly cosmetic. In severe cases respiratory and functional impairment and curve progression play a role. The treatment options are brace (BT) or surgical (ST). Together with the disease itself they may both be physically and psychologically demanding.

The aim of the present study was to elucidate the 10 years post-treatment outcome in a group of patients who have been treated by brace or have undergone an operation due to AIS.

MATERIALS AND METHODS: Two-hundred-and-fifteen consecutive patients treated at the Univ. Hosp. of Copenhagen 1983-1990 received a questionnaire at mean 9,7 (7-14) years after the last contact to the hospital. The male/female ratio was 1:9 and the mean age at follow-up was 26,0 (range 20-34) years. The topics of the questionnaire were demographics, back, activity of daily living (ADL), and SF-36. The BT patients received an appendix to the questionnaire comprising brace-related questions.

The mean age in the BT group was 14,2 (range 9-20) years at the time of bracing. The brace period was mean 2,6 (1-5) years. Among the 136 patients treated with a Boston brace 113 (83%) replied.

The mean age in the 115 ST-patients was 14,9 (12-21) years at the time of the operation and 99 (86%) replied.

RESULTS: The level of pain was relatively low and the level of ADL high with no significant difference between the two groups. We found no significant difference between BT- and ST-patients in the present study for any of the SF-36 variables. Compared to 408 age-matched Danish female controls we observed lower SF-36 scores in the AIS patients in all variables.

CONCLUSION: Compared to the levels for healthy age-matched controls patients treated for AIS were found to have only a modest reduction in SF-36 and ADL and moderately increased pain.

Heritability of Scheuermann's disease: Based on a cohort study of twins.

Frank Damborg, Vilhelm Engell, Kirsten O. Kyvik,

Mikkel Ø. Andersen, Karsten Thomsen

Spine Section. Dept. of Orthop. Surg. University Hospital of Odense
and Danish Twin Registry. Dep. Of Public Health - Epidemiology.
University of Southern Denmark.

INTRODUCTION: In Mb. Scheuermann several theories based on genetic and mechanical factors have been proposed and the purpose of this study was to examine whether genetic factors contribute to the pathogenesis of this disease.

MATERIALS AND METHODS: The cohort from the Danish Twin Registry consists of all twin pairs born between 1931 and 1982. The 46,418 twins all received and 34,944 (75%) returned the questionnaire. 34,007 (97.3%) answered the question "Have you been diagnosed with Scheuermann's disease?" The pair-wise and the proband-wise concordance and the heritability was calculated.

RESULTS: 380 females and 563 males reported to have Scheuermann's disease so that the overall prevalence was 2.8% (95% c.i.l. 2.6-3.0). The male and female prevalences were 3.6% (95% c.i.l. 3.2-4.1) and 2.1% (95% c.i.l. 1.9-2.3) ($P < 0.0001$). Of 11,436 twin pairs in whom both answered the above question 645 indicated that they had been diagnosed with Scheuermann's disease. The pair-wise concordance was 0.19 (95% c.i.l. 0.13-0.25) for MZ and 0.07 (95% c.i.l. 0.04-0.11) for DZ twin pairs ($P < 0.001$). The proband-wise concordance was 0.31 (95% c.i.l. 0.25-0.37) for MZ and 0.13 (95% c.i.l. 0.09-0.17) in DZ twin pairs. Heritability was 0.74 (95% c.i.l. 0.65-0.81).

CONCLUSION: The prevalence of Scheuermann's disease was as expected from the literature, with a higher male prevalence of twice the female. The higher concordance rate of MZ pairs confirms the contribution of a major genetic component as does the calculated heritability of 0.74.

Clubfoot - a twin study

*Vilhelm Engell, Frank Damborg, Mikkel Andersen,
Kirsten Kyvik, and Karsten Thomsen*

Department of Orthopaedic Surgery, University Hospital of Odense,
and The Danish Twin Registry, Institute of Public Health,
University of Southern Denmark

INTRODUCTION: The aetiology of congenital clubfoot is unclear. Although studies on populations, families, and twins suggests a genetic component the mode of inheritance does not comply with distinctive patterns. In 1939 Idelberger reported the concordance rates in twins to be 0.33 for monozygotic (MZ) and 0.03 for dizygotic with the same sex (DZss). The purpose of this study was to establish a congenital clubfoot twin cohort that enables us to provide estimates of concordance with a higher accuracy than seen before.

MATERIALS AND METHODS: The Odense based Danish Twin Registry (DTR) is unique as it contains data on all 73,000 twin pairs born in Denmark over the last 130 years. All 46,418 twins born from 1931 through 1982 received a 17-pages Omnibus questionnaire in the spring of 2002. One question was 'Were you born with clubfoot?'

RESULTS: Ninety-four twins answered 'Yes' to the above question giving an overall self-reported prevalence of congenital clubfoot of 0.0027 (95% confidence interval 0.0022-0.0034). Fifty-five complete (both twins answered the question) twin pairs was identified representing 12 MZ, 22 DZss, 18 dizygotic other sex (DZos), and 3 with unclassified zygosity. Of these 2 MZ and 2 DZss pairs were concordant. The pair-wise concordance was 0.17 (95% c.i. 0.02-0.48) for MZ, 0.09 (95% c.i. 0.01-0.32) for DZss, and 0.05 (95% c.i. 0.006-0.18) for all DZ (DZtot).

CONCLUSION: We have found evidence of a genetic component in congenital clubfoot. However non-genetic factors must play a predominant role. To further elucidate what role inheritance plays in this disease genetic studies are demanded.

Treatment for DDH reduced to two 0/00 live births. A pro-spective study in 583 children.

Søren Harving,

Childrens Section, Århus University Hospital,
Northern Orthopedic Division, Aalborg, Denmark

INTRODUCTION: The aim of this study was in a prospective design to follow DDH treated patients.

MATERIAL AND METHODS: 583 children under two months referred to the hospital were tested with Ortolani and Barlow tests and ultrasound (US).

Group A: Clinically stable and US normal hips. Group B: Barlow positive and/or US positive. Were instructed in abduction exercises and followed with US and x-ray. Group C: Luxated or very loose. If free abduction Dennis-Brown splint was applied. If contracture - abduction exercises and splint later. Treatment for 12 weeks.

RESULTS: Group A: 214. Group B: Barlow negative and US positive 143 pts. of which 7 had dysplastic hips on x-ray at 6 months. All became normal. Group B: Barlow pos. and US pos. 110 pts. (77 females; and 33 males;). Barlow pos. and US neg. 44 pts. (23 females; and 21 males;). Only one had US dysplasia at three months. All became x-ray normal. Group C: 59 pts were treated with DB splint. 45 females; and 14 males;. Four had physiotherapy and delayed treatment for one week because of contracture. Two were treated after one month, and one after two months because of lack of improvement in stability in Barlow test. One serious complication occurred in a girl wrongly tested stable. At six months subluxation The child had spica for three months. The hips developed normally. In group C x-ray demonstrated three cases of necrosis of one femoral head Kalamchi and MacEwen grade I which have a good prognosis. Treatment is less than 2 0/00.

CONCLUSION: Abduction exercises is good and safe treatment for Barlow positive and/or ultra sound positive DDH. Dennis-Brown splint seems to be a safe treatment with few and minor complications.

Somatic problems among adult patients with cerebral palsy

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INTRODUCTION: At some hospitals treatment of cerebral palsy among children is systematized based on teamwork. However treatment of adults is dispersed and not centralized. The Danish patient society "Spastikerforeningen" carried out an examination of adults in order to evaluate the need of further treatment after adulthood.

METHODS AND PATIENTS: In a 3 years period the society invited patients with cerebral palsy to an extensive health examination. The examination was performed by an orthopaedic surgeon, a neurologist, a psychologist. 250 patients responded to the invitation. 49 fulfilled the criterion for participation and 27 went through the programme. The mean age was 32(17-48) and the participants came from all over the country. 20 received invalidity pension. The orthopaedic examination registered number of operations and joint contractions.

RESULTS: 15 used wheelchairs. 21 had undergone operations, (21 soft tissue, 9 osteotomies). 12 of the 21 still had contractions of their joint in lower limb. 23 were referred to further treatment. 7 needed medical treatment, 4 orthopaedic surgery and 6 persons were referred to physiotherapy.

CONCLUSION AND DISCUSSION: Only 4 of the participants were well treated somatically. Further more the project revealed a range of unrecognized cognitive defects giving a lot of problems for the patients in daily life. The investigation is an argument for establishing a centralized treatment unit for adult patients with cerebral palsy.

The Incidence of Calve Perthes' disease in Greenland

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INTRODUCTION: The incidence of Calve Perthes' disease varies in different parts of the world and there seems also to be a regional variation, the rate being higher in urban than in rural areas. Genetic factors and race may play a role. Very low rates are found among black children (0.45 cases a year per 100.000 children under the age of 15), but also Asians have a low incidence. In Denmark, Mose (1964), found annual incidence in two different areas to be 8 and 9 per 100.000 children. In Sweden the incidence is 8.5 (Moberg and Rehnberg, 1992). High rates were reported from the Faeroe Islands (Niclasen, 1974) with an annual incidence of 29 per 100.000 children. Niclasen raised the question if the high incidence could be attributed to the high rate of intermarriage within the small population of the islands.

The incidence in Greenland and among inuits is not known.

MATERIAL AND METHODS: During the ten-year period from 1995 to 2004 one of the authors (SBC) has been a consultant in paediatric orthopaedic surgery during annual travels in Greenland. 54 children with Calve Perthes' disease were recorded. Population statistic material was collected from Statistics Greenland, regarding annual numbers of children under the age of fifteen and annual birth rates.

RESULTS: The annual incidence of Calve Perthes' disease in Greenland was 35.7 per 100.000 children under the age of 15 (95% confidence interval: 26.8-44.6). Age specific incidence based on birth rates from 1985 and later on was 319 per 100.000 born children (95% confidence interval: 241-397).

CONCLUSION: The population of Greenland has the highest incidence of Calve Perthes' disease ever reported. Reasons are unknown. It is possible that the incidence is underestimated if patients with slight symptoms from distant small villages were not referred.

Experimental porcine model of intervertebral disc degeneration

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INTRODUCTION: Intervertebral disc degeneration (IVDD) is a multifactorial chronic disease based on changes in disc structure, function, cell and matrix composition. IVDD is the most common reason to chronic low back pain and can lead to many other conditions (disc herniation, spinal stenosis etc.).

MATERIAL AND METHODS: 8 female Danish landrace pigs (3 months, weighing 50 kg) were operated in the lumbar spine. Levels L3/4, L4/5 and L5/6 were randomised to needle stab, scalpel incision (anterolateral annulus fibrosus (AF)) and nucleus pulposus (NP) aspiration. Levels L2/3 and L6/7 served as control levels. MRI and X-rays were made pre-operative and post-operative after 3 months of observation. IVDD were evaluated by MRI, X-rays, anatomical view and histology.

RESULTS: All pigs went through the observation period without complications. MRI showed markedly decrease in T2 signal intensity (SI) in levels with scalpel incision. The endplates appeared isointense on both T1 and T2. The vertebral body also showed isointensity on T2. NP had become fibrotic compared to the gelatinous control levels. There were no signs of NP herniation.

CONCLUSION: The pig has the closest resemblance to human vertebrae and facet joints of the commonly used big animal models. We found a significant decrease in T2 SI and fibrotic NP. Even though the pig is immature and still growing, we think that the porcine IVDD model resembles that of the early human IVDD.

Osteoclastic bone resorption in chronic osteomyelitis.

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INTRODUCTION: It is well described that TNF- α and RANKL can induce osteoclastic bone resorption, but little is known about the effect these signaling molecules have on the inflammatory response due to chronic osteomyelitis. It still remains unclear whether the bone loss occurring at the infection site is beneficial or detrimental to the host.

MATERIAL AND METHODS: A novel murine osteomyelitis model was developed to determine the role of osteoclastic bone resorption in chronic osteomyelitis. We characterized the immune response during the course of the infection using ELISA and examined the bacterial load and bone resorption using histological analysis in 30 C57Bl/6 mice divided into 5 groups: treatment with Enbrel, RANK:Fc, and Alendronate, negative control group without infection and infected group with no treatment as positive control.

RESULTS: The osteoclastic bone resorption was inhibited in all treatment groups, with the largest effect achieved using RANK:Fc. Histology of the infected tibias showed increased bacterial load in all treatment groups compared to untreated control animals. ELISA analysis revealed that mainly IgG2b sub-isotype antibodies are responsible for the adaptive immunity during chronic osteomyelitis infection and that none of the treatments affected the immune response.

CONCLUSION: Our findings suggest that osteoclastic bone resorption is required for bacterial clearance in chronic osteomyelitis and inhibition of osteoclastic activity using such treatments as RANK:Fc, Enbrel and Alendronate can result in impaired bacterial clearance from infected bone tissue. The fact that none of the treatments affected the adaptive immune response supports the theory that osteoclastic bone resorption is required for bacterial clearance in chronic osteomyelitis.

Blood flow and microdialysis in the femoral head in humans. Possible new predictors in the treatment algorithm of femoral neck fractures

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INTRODUCTION: Femoral neck fracture is common in the elderly, and with the aging population the number of fractures is likely to increase in the future. There are two main treatments of the dislocated fractures; hemiarthroplasty or osteosynthesis. Among the patients receiving osteosynthesis, 20-30% will experience failure resulting in reoperation. Preserving the hip seems optimum in the light of that studies have shown that patients with a united femoral neck fracture have a better functional outcome than patients with hemiarthroplasty.

In order to distinguish between the treatments for the individual patient, we hypothesize that ischemia has influence on the outcome of the osteosynthesis. In the present study microdialysis (MD) and laserdoppler (LD) flow measurement were established in the human femoral head.

MATERIALS AND METHODS: In 10 patients undergoing total hip arthroplasty for primary osteoarthritis, two MD catheters were inserted into the femoral head through two drill holes, after the blood flow was demonstrated by LD. Then 2 samples were collected with the femoral head in situ, after this the head was removed and samples were collected over the following 4 hours ex vivo. The variables obtained by MD are concentrations of: glucose, lactate, pyruvate and glycerol in extra cellular fluid.

RESULTS: The results show the development of ischemia in bone, with statistical significant decrease in glucose concentration and a raise in the lactate/pyruvate ratio over time. The absence of flow was verified by LD.

CONCLUSION: For the first time MD has been established in the human femoral head. Ischemia developed within 2 hours after cessation of blood flow in almost all patients. Whether the methods are useful in daily practice has to be analyzed in patients with femoral neck fractures.

Wear testing of pliable composite cross-linked polyethylene intraarticular unconstrained resurfacing cup

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INTRODUCTION: Before insertion of new implants mandatory tests are performed regarding wear, toxicity and functionality.

An intraarticular unconstrained pliable resurfacing cup, which is intended for use in patients with severe osteoarthritis were assessed for long term in vitro wear.

MATERIAL AND METHODS: The composite implant cups were produced from a sandwich lay-up of two layers of long-chained polyethylene fibre fabric placed on each side of a low density poly-ethylene (LDPE), hence the low stiffness of the implant. Seven test specimens were manufactured at Keiserplast A/S in clean room facilities. The specimens were cross-linked at an electron accelerator at Risø and annealed. The wear tests were carried out using a combined tension-torsion servo hydraulic INSTRON 8874 test rig. The rotation was set to 30 degrees and axial loads ranged from 205 to 2500 N. Ceramics mimicking the hardness of arthritic joint surface were constructed as joint facets. The wear tests were performed in Bovine Serum at a controlled temperature of 37 C.

RESULTS: The cup was subject to 15.000.000 cycles with the load pattern simulating walking. The wear rate was approximately 30-40 microm per 1 million cycles. Gravimetric weight and particle release loss could not be quantified in this set-up, but less than 300 mg may have been worn of.

CONCLUSION: The 15 million cycles are estimated to correspond to approximately 15 years use of the cup for a person with moderate activity excluding sports activities. During this period no severe wear of the implant was observed.

An animal model for partial thickness chondral defects

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INTRODUCTION: Traumatic lesion in the articular cartilage is a major cause of osteoarthritis among young people. Thus, a vast effort is conducted in research ensuring complete cartilage regeneration. Yet, the definite treatment method is still to be developed, emphasizing the complexity of cartilage regeneration. When boarding animal studies, the experimental model must allow each process in the regenerative response to be isolated, permitting thorough and pinpointed analysis of the utilised treatment. Still, most studies involve osteochondral lesions where marrow stem cells and growth factors invade the joint cavity and “contaminate” the result of the treatment.

We present a new animal model device, which can create a partial thickness cartilage defect, yet deep enough for implantation of regenerative substances.

MATERIAL AND METHODS: 8 cadaver goat femora were used. A custom designed drilling tool was firmly attached to the distal femur. The tool allowed precise ultra sonic measurement (US) of the cartilage thickness prior to drilling. The drilling tool was adjusted accordingly. A defect attempting to reach 75% of the cartilage thickness was established in the medial femoral condyle. The relative depth of the defect was estimated histologically using stereology.

RESULTS: We were able to produce cartilage defects with a mean depth of 74% CI95[0.66;0.81] of the total thickness. One defect showed a small penetration of the subchondral bone. Double measurements of cartilage thickness using US showed a CV of 1.8 %.

CONCLUSION: We have developed an animal model with a drilling tool based on US measurements for establishing reproducible partial thickness chondral defects in the goat knee. The device will be used in studies of treatment response in cartilage regeneration based on tissue engineering

Patents from Copenhagen Hospital Cooperation (H:S) from year 2000 to 2004

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INTRODUCTION: In the year 2000 Copenhagen Hospital Cooperation (H:S) established its own Technology Transfer Office (TTO), which handles the new patent law from the year 2000. The researchers immaterial property rights are respected in a proportional economical model. We describe the early outcome from the year 2000 until 2004.

MATERIAL AND METHODS AND RESULTS: Before 2000 The Office had received 15 disclosures of inventions from the H:S Hospitals, and since then 87 disclosures has been received. The increase of disclosures has been steadily from year 2000 to 2004. In the year 2000 - 2004 The TTO has received the owner-ship/considering taking over the ownership to 27 inventions from Rigshospitalet (RH), 5 from Bispebjerg Hospital (BBH) and 15 from Hvidovre Hospital (HH). In the year 2004 the preliminary counts were 6 from RH, 3 from BBH and 3 from HH. H:S TTO has decided to return 55 of the disclosed inventions to the inventors for their own exploitation. From the 47 inventions that the TTO has decided to keep for further commercialising, the office have achieved 11 licence agreements, and are at the moment negotiating agreements concerning 10 of the disclosed inventions. Eight of the disclosed inventions have founded 7 start-up companies, while the office now are trying to establish 3 more companies.

The rejection rate from the TTO was initially 80 % before the year 2000 and in 2004 it was 37%. The overall annual number of disclosers per year is nearly 20 and seems rather constant. Recently, more orthopaedic related patents have appeared and accounts for more than 10 %.

CONCLUSION: The patent activity has increased and the future potential may be significant. The awareness of the value of patents and the commercial possibilities should be shared among research-ers.

The effect of tobacco extract and nicotine alone and in combination on fracture healing in rats

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INTRODUCTION: Fracture repair is slower and less complete in smokers compared to people who do not smoke.

The influence of nicotine and tobacco extract (without nicotine) alone and in combination on callus formation and mechanical strength of femoral fracture in rats was investigated after 21 days of healing.

MATERIAL AND METHODS: 104 Sprague-Dawley rats were divided into four groups receiving; nicotine, tobacco extract, nicotine plus tobacco extract, and vehicle. One week prior to fracture surgery Alzet miniosmotic pumps were implanted subcutaneously to administer saline or nicotine, while tobacco extract were administered orally. A closed transversal fracture was performed as described by Bonnarens and Einhorn.

RESULTS: After 21 days of healing ultimate torque and yield point of the tobacco extract group was decreased by 26 % ($p=0.010$) and 29 % ($p=0.056$), respectively compared to the vehicle and 25 % (0.023) and 36 % ($p=0.004$), respectively compared to the nicotine group, whereas no difference was found between the tobacco extract and tobacco extract plus nicotine group ($p = 0.239$). A 22 % ($p=0.013$) reduction in yield point were observed between the tobacco extract plus nicotine group and the nicotine group. No differences in ultimate stiffness and energy absorption were found between the groups.

Serum levels of nicotine between 40 – 50 ng/ml were achieved.

CONCLUSION: Tobacco extract without nicotine decreases mechanical strength of the healing fracture compared with vehicle.

Nicotine does not depress the mechanical strength of the healing fracture, when given in a dose inducing serum levels equivalent to those observed in daily smokers.

Reduced complication rate after optimized hip fracture program

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INTRODUCTION: The objective of the hip fracture program was to improve patient care and subsequently, if possible, reduce patient complication rate in patients with hip fractures. We studied the frequency of complications after the introduction of an optimized hip fracture program.

MATERIAL AND METHODS: In the optimized hip fracture program fracture pain was relieved by femoral nerve catheter from the admittance until the 4th postoperative day. Patients were allowed soft drinks with carbohydrates until two hours before surgery. Intensive physiotherapy guided mobilization at the ward was initiated immediately following surgery.

The study was designed as an open prospective observational intervention study. Hip fracture patients admitted to Bispebjerg Hospital between January 1st and September 30th 2003 (traditional patients) and between November 1st 2003 and March 31st 2004 (optimized patients) were included. Information about complications was extracted from the medical records.

RESULTS: Included in the study were 357 consecutive control patients (M/F-ratio: 85/272, median age M and F: 77.5 and 84.2 years) and 178 consecutive patients in the intervention group (M/F-ratio: 42/136, median age M and F: 76.9 and 83.7 years).

The frequency of delirium was 9.5% vs. 3.9% ($p=0.02$) for the control vs. the intervention group, pneumonia 10.6% vs. 5.1% ($p=0.03$) and urinary tract infection 17.4% vs. 6.7% ($p=0.001$). There was no difference in ASA-score or in the frequency of acute or chronic diseases at the admission. No statistical differences were found between other postoperative complications.

CONCLUSION: The optimized hip fracture program reduced significantly the frequency of confusion/delirium, pneumonia and urinary tract infection.

Effect of postoperative epidural analgesia on rehabilitation and pain after hip fracture surgery: a randomized, double-blind, placebo-controlled trial

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INTRODUCTION: Hip fracture surgery is characterized by a high demand for rehabilitation. Postoperative epidural analgesia may reduce postoperative morbidity¹, and has been shown to facilitate rehabilitation in elective orthopedic procedures. No studies exist on the effect of postoperative epidural analgesia on pain and rehabilitation after hip fracture surgery.

MATERIALS AND METHODS: Sixty elderly patients were included in a randomized, double-blind study comparing 4 days of continuous postoperative epidural infusion of 4 ml h⁻¹ of bupivacaine 0.125 % and morphine 50 mcg ml⁻¹ versus placebo. Both patient groups received a balanced analgesia and intravenous nurse-controlled analgesia with morphine. All patients followed a well-defined multimodal rehabilitation program. Assessment of pain and the ability to perform four basic physical functions, as well as any restricting factors to participation, were done on each of the first four postoperative days during physiotherapy.

RESULTS: Epidural analgesia provided superior analgesia during all basic physical functions, and patients were significantly less restricted by pain, which was the dominating restricting factor in the placebo group. Motor blockade was not a restricting factor during epidural analgesia. Despite improved pain relief, scores for recovery of physical independence was not different between groups.

CONCLUSION: Postoperative epidural analgesia after hip fracture surgery provides superior analgesia and attenuates pain as a restricting factor during rehabilitation without motor dysfunction. Superior analgesia did not translate into enhanced rehabilitation. Future studies with multimodal rehabilitation are required to establish, whether the superior analgesia can be translated into enhanced rehabilitation and reduced morbidity in hip fracture patients.

Treatment of complex fractures of the proximal tibia with Ilizarov external fixation. - Preliminary results

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INTRODUCTION: Complex fractures of the proximal tibia are known to be challenging. Recently we have treated those fractures using the Ilizarov-method of external fixation. We present our experience with this method

MATERIAL AND METHODS: From 01.06.2002 to 31.01.2005 39 fractures in 38 patients were treated. The median age was 52 years (18 – 89 years). 11 patients had other significant injuries. According to the AO-classification 8 fractures were type A, 4 type B, 27 type C. 31 intra-articular fractures were classified according to Schatzker's classification as 1 type 3, 2 type 4, 8 type 5 and 20 type 6. 10 fractures were open: 5 Gustillo type 1, 3 type 2, 1 type 3A and 1 type 3C. 6 patients were discharged to follow-up at local hospitals leaving 32 patients with 33 fractures for the study.

RESULTS: 29 fractures healed uneventfully. The external fixator was removed after median 16 weeks (range 5 – 50 weeks). There were two non-unions, which both healed after a secondary procedure. 23 patients had pin-tract infection, 4 had minor secretion located at the heads of the cannulated screws, all of which were managed by local soft tissue revision. 2 patients had septic arthritis, one leading to a secondary loss of reduction and one had a deep infection at the fracture site, also leading to secondary loss of reduction.

CONCLUSION: These preliminary results suggest that the Ilizarov-method is a good method of reducing and stabilizing complex fractures of the proximal tibia. While superficial infections are common, only a few had significant infections, compared to other methods. Perhaps more experience with the method can prevent some of the most serious complications in the future. However, in order to fully evaluate this method, report of long-term functional results is needed.

Sixty-one Complex Tibial Plateau Fractures treated with Ilizarov Frames. Primary results

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INTRODUCTION: Complex tibial plateau fractures treated with open reduction and dual plating have a high incidence of deep infection and wound healing problems. Thus we prefer to treat these fractures with minimal invasive reduction and stabilisation with Ilizarov frames. We want to present our primary results.

MATERIAL AND METHODS: Retrospectively, we studied files and x-rays from 60 patients treated for 61 fractures in the period from 01.01.95 to 31.12.01. Median age was 51(24-89) years. One fracture was a Schatzkers type IV, 31 fractures were type V and 29 fractures were type VI. Thirteen fractures were open. The surgical procedure included supplement with screws in 17 cases and the use of autograft in 28 cases. Weight bearing was allowed after median 3(0-8) weeks.

RESULTS: Median hospital stay was 13(7-44) days. One elderly patient had a knee amputation due to crush and nerve deficit. The rest of the fractures healed (two patients after bone grafting) within median 14(10-32) weeks. The mechanical axis at union was normal in the AP plane in 57/60 fractures and in the lateral plane in 58/60 fractures. Six patients were perioperatively treated for compartment syndrome. Postoperatively 3 patients had neuropraxia. Four patients had septic arthritis and were treated by synovectomy. Four patients needed arthroscopic release. In two cases the fractures resulted in TKA and in one case in a high tibial osteotomy. The median ROM at the final examination was 120(55-140) degrees.

CONCLUSION: Minimal invasive reduction and Ilizarov fixation of complex tibial plateau fractures allows early weight bearing and has a low incidence of deep infections.

Collarless HA-coated hemiarthroplasty (Future®) not suitable for osteoporotic hip fractures.

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INTRODUCTION: The reported disappointing results with non-cemented Austin Moore/ Thomson hemiarthroplasty (Ultima) initiated this study of a new HA-coated hemiarthroplasty.

MATERIAL AND METHODS: Patients with displaced femoral neck fractures, fulfilling the criteria for the use of an uncemented hemiarthroplasty, were included from March 2004. One Hundred Future® hemiarthroplasties were planned to be inserted. Follow-up was at 6 weeks, 3 and 6 months.

RESULTS: The study was discontinued after 41 operations due to an unexpected high rate of periprosthetic femoral fractures. There were six periprosthetic fractures. Five fractures occurred within the first two weeks. One fracture occurred after six weeks. Four patients were reoperated. Five patients had dislocations, one of which also had a fracture. One patient was reoperated with a constrained liner. Nine patients died before the first follow-up. One of these patients had a fracture and was re-operated. One patient had a dislocation one week postoperatively. Twenty-one patients were without complications and had well-integrated femoral stems after 3 to 6 months.

CONCLUSION: The Future femoral stem was designed for osteoarthritis. We used the stem as a hemiarthroplasty to reduce re-operations after uncemented Ultima hemiarthroplasty, and to avoid the use of cement. We found the stem design to be the probable cause of the high failure rate. The surgeons were specialist orthopaedic surgeons and operations performed by trainees were supervised by a specialist. The stem press-fit insertion in osteoporotic bone of hip fracture patients can be critical. HA-coated stem design with a collar has to be tested in randomised trials to determine the alternatives to the uncemented Austin Moore/Thomson hemiarthroplasty.

Carpal tunnel syndrome. Prognostic and economical factors associated with endoscopic operation

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INTRODUCTION: The purpose was to identify prognostic factors for return to work and normalization of functional level after endoscopic operation for carpal tunnel syndrome, and to consider the economical consequences in relation to the traditional open operation in a cost-effectiveness analysis with sick days gained as outcome measure.

MATERIAL AND METHODS: A prospective observational study of a fixed cohort. In all 99 persons were scheduled for endoscopic operation for the carpal tunnel syndrome. At base-line, a self-administered questionnaire was collected relating to physical, psychological and social circumstances in relation to the hand problem. Data from a nerve conduction examination were collected at baseline and at the three months follow-up, when also a self-administered questionnaire was collected. The significant prognostic factors were identified through multiple logistic regression test.

In addition, a cost-effectiveness analysis was performed of endoscopic operations as compared to the conventional open type of operation based on published data of sick leave after conventional and endoscopic carpal tunnel release.

RESULTS: Pre-operative work-absence (OR 7.4), distal motor latency (OR 1.7), thoughts of change of work (OR 3.8), and blaming self for hand problem (OR 1.2). If 1,311DKK are added in the form of endoscopic operations, postoperatively this will result in a gain of 11 days of work absence. This will give a reduction in costs of 5,650DKK per person.

CONCLUSION: Preoperative work-absence, blaming self, distal nerve conduction motor latency, and hand problems were prognostic factors for post-operative work absence. Endoscopic operation for the carpal tunnel syndrome is cost-effective when compared with the traditional open-type operation.

A short term follow up on 81 STAR Ankle joint replacements

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INTRODUCTION: During the late seventies and the early eighties several promising short term reports on ankle joint replacement were published. In the late eighties, most reports with longer observation time showed high loosening rates. However some of the unconstrained prostheses seemed promising. One of these prostheses was the STAR prosthesis.

MATERIAL AND METHODS: From 1998 to February 2005 we performed 82 STAR ankle joint replacements in 78 patients. Thirty-four patients with 37 prostheses had rheumatoid arthritis (RA) and 45 had osteoarthritis (OA). Eighteen RA and 16 of the OA patients had additional surgery in the same or in a separate procedure in order to realign the hindfoot. Survival analyses were done on the RA and OA patients separately.

RESULTS: Overall, four patients with RA and 2 with OA had their prostheses removed. In the RA group there were 8 cases of delayed wound healing, two of them needed minor revision and one resulted in a deep infection and loss of prosthesis. Three additional prostheses were lost in the RA group, one due to postoperative deep infection, one due to a late septic infection. Both were converted to an arthrodesis. One more in the RA group was revised 3 months postoperatively due to stress fracture of the anterior tibial cortex.

In the OA group there were 3 cases of delayed wound healing and one of them needed wound revision. One was revised due to early aseptic loosening and one was converted to an arthrodesis because of mechanical instability.

CONCLUSION: In the short term the STAR ankle joint prosthesis seems promising. There is a significant risk of developing skin necrosis and delayed wound healing especially in the RA patients. Delayed wound healing is an issue of great concern since it puts the prosthesis in risk of secondary infection.

Shock wave therapy of chronic Achilles tendinopathy. A randomised controlled trial

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INTRODUCTION: Chronic achilles tendinopathy is a painful condition with frequently unsatisfactory results of conservative treatment. Extracorporeal Shock Wave Therapy (ESWT) has been used in the management of various soft tissue conditions. But not all treatment programmes are effective. The aim of the study was therefore to investigate the effect of supplementary ESWT versus placebo to conservative treatment of chronic achilles tendinopathy.

MATERIAL AND METHODS: In a double-blind randomised study 48 patients, (28 men and 20 women), age 47 (19-80) years, assigned to conservative treatment of chronic achilles tendinopathy were supplementary allocated to receive either active ESWT or sham ESWT during 4 weeks. AOFAS score and pain were assessed before treatment, during the 4 weeks treatment period and during 3 months follow-up.

RESULTS: Both groups improved during the treatment and follow-up period. The median AOFAS score increased from 75 (42-87) to 83 (42-100) in the placebo group and increased from 70 (50 - 85) to 90 (71 - 100) in the intervention group. There was no significant difference in the end results between the two groups ($P = 0.13$). The increase of the AOFAS score in the intervention group was 16.5 (-2 - 50) compared to 7 (-7 - 40) in the placebo group ($P = 0.002$). In the intervention group 22 improved compared to 14 in the placebo group ($P = 0.02$).

CONCLUSION: Extra corporal shock wave therapy seems to be an effective supplement to the treatment of chronic achilles tendinopathy.

Kinematics of the elbow joint after application of two different types of hinged external fixation: a cadaver study

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Afdeling(er) som arbejdet udgår fra

INTRODUCTION: Articulated external fixators are applied to the elbow joint in complex disorders with the purpose to provide early motion while preserving stability. Such fixation may impose non-physiologic constraint to the elbow, if it is not aligned correctly with the axis of flexion. The aim of this study was to determine the kinematics and stability of an experimental elbow model after application of two different types of external fixators. One fixator had a “built-in” laxity, which may compensate for any misalignment, while the other was constrained except for flexion-extension.

MATERIAL AND METHODS: 8 human cadavers elbow specimens were studied in a set-up, which allowed application of controlled loads and reading of the resulting rotations in 3 dimensions. Unloaded joint motion and laxity during application of a 0.75 Nm torque was determined in intact joints and after mounting each of the two fixators in 3 joint conditions: (1) intact, (2) LCL deficient, and (3) LCL + MCL deficient. The alignment of the fixators was verified by fluoroscopy.

RESULTS: Compared with the intact joint, valgus laxity was decreased after application of each of the fixators in any of the three injury stages (between 3.2 and 4.5). Varus laxity was unchanged. External rotatory laxity was reduced 4.4 - 6.0 , and internal rotatory laxity 1.4 - 3.3 . Both fixators guided motion in a more varus and internally rotated position during un-loaded movement. There was no difference between the two fixators regarding their effect on motion or laxity.

CONCLUSION: With the loads used, both fixators sufficiently stabilize ligament deficient elbow joints. Both fixators forced the joints to move differently from the normal joint, confirming previous observations that no true single axis of flexions exists.

Bonedistraktion in the treatment of thumb amputations.

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INTRODUCTION: Bone distraction a.m Ilizarov has been suggested as an alternative to thumb replantation. In this study the treatment was used in twelve cases of thumb amputation where re-plantation was not possible.

MATERIAL AND METHODS: Bone distraction was performed at metacarpal level in 12 patients. After application of Mini Ortofix external fixator, transverse osteotomy was performed in the first metacarpal bone. Five to seven days postoperatively distraction with 1 mm per day was started. After sufficient lengthening immobilization was continued until consolidation of the bone.

RESULTS: Final lengthening of the first metacarpal bone was 25 mm (19-35). Mean distraction per day was 0,8 mm and the duration of distraction was 30 days (19-57). Consolidation was achieved after median 89 days (31-216). Function results were graded as good in 7 patients, 3 patients had fair results and 1 had poor result. In one patient follow up failed. In 2 cases non-union occurred. There were no deep infections.

CONCLUSION: replantation is the treatment of choice in thumb amputations. Bone distraction for thumb lengthening is a salvage procedure with generally good results.

Results of Thumb Replantation 1993-2002

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INTRODUCTION: Replantations in Denmark have been centralised at Odense University Hospital since 1993. The results of 68 isolated thumb- replantations and revascularisations performed in the first ten years after centralisation were evaluated.

MATERIAL AND METHODS: In the period 1993-2002 36 replantations and 32 revascularisations of isolated total or subtotal amputations of thumbs were registered in our replantation register and further information's collected retrospectively from patients records.

RESULTS: Survival of thumbs: total 74%(50/68). Survival related to mechanism of amputation: clean cut 77%(23/30), crush 81%(22/27), avulsion 45% (5/11). Of 50 patients with survived thumbs 33 returned to former work, two were not able to go back to former job, 8 had pension before amputation, 5 were children. Two were not elucidated.

CONCLUSION: The survivalrate in replantated thumbs in our material correlates with international results, and the function of succesfully replantated thumbs was good in most cases

Validation of minimally invasive surgery acetabular reamers using optical three-dimensional scanning.

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INTRODUCTION: With the introduction of minimally invasive hip surgery, demands for newly designed surgical instruments have risen. The aim of this study was to validate a new acetabular reamer designed for minimally invasive surgery (MIS).

MATERIAL AND METHODS: 18 acetabular cavities from embalmed cadavers were reamed with 2 different reamers, a conventional reamer and a MIS reamer. Optical three-dimensional (3-d) scanning of the reamed acetabuli was performed to determine the accuracy of the two reamers. Best-fit spheres and sphericity ratios were calculated to evaluate topography of the reamed cavity.

Eight acetabuli underwent double examinations to evaluate the precision of the 3-d optical measurement system

RESULTS: The coefficient of variation, determined from double measurements on eight randomly selected acetabuli was 0% for the best-fit analysis.

In the best-fit analysis no significant difference between MIS. (Mean 0.12mm, SD. 0.46mm) and conventional (Mean 0.27mm, SD. 0.35mm) reamed cavities could be detected ($P=0.58$). A significant correlation between the size of the reamer and the size of the prepared acetabuli was found, showing small reamers produce deeper cavities than large reamers ($P<0.001$). Bone-prosthesis contact maps of both reamers showed good peripheral contact whereas large gaps exceeding 0.5 mm at the polar area were demonstrated. The average area of bone-prosthesis contact was calculated to 68.3% (SD 7.8%) for MIS reamers and 62.2% (SD 13.2%) for conventional reamers with an on-line virtual hemispherical acetabular component.

CONCLUSION: We conclude that even though the acetabular reamer-design has been greatly modified, no differences in the performance were found between a MIS reamer and a conventional reamer.

Preliminary results of an uncemented modular femoral component for hip arthroplasty revision surgery.

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INTRODUCTION: Revision of the femoral stem can be difficult due to extensive bone resorption in the proximal part of the femur. A stem with distal fixation is a possible solution to this problem. Short term results after revision of the femoral component with an uncemented modular prosthesis with distal fixation and without bone grafting (Zimmer Modular Revision) are reported.

MATERIAL AND METHODS: 80 stem replacements with the ZMR system are included. Surgery was performed from March 26, 2001 to November 17, 2004. Median age of the patients was 70(60-78) years. 36 women and 44 men were operated. Number of surgeons was 4. Median follow-up was 13(12-24) months. The primary reason for revision was aseptic loosening (63%). Taper stem was used in 81% of the cases. Wagner osteotomy was performed in 49 cases.

RESULTS: Median Harris Hip Score increased from 51 to 88. Five cases of intraoperative complications all due to removal of cement were observed. Subsidence more than 1 cm was observed in one patient but stabilized after 1 year. One non-union of the osteotomy was observed. Regeneration of the bone stock was observed constantly at an early stage. Only one stem due to fracture beneath the stem has been revised. The results using this implant are significantly better than those previously reported from this department using recementation or an uncemented stem with proximal fixation in combination with massive bone grafting.

CONCLUSION: The short term results with the ZMR stems were satisfactory. A longer period of follow-up is needed.

Patient characteristics and survival of total hip arthroplasties

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INTRODUCTION: We examined factors associated with short and long term implant survival after primary total hip arthroplasties according to different patient's characteristics, including gender, age, comorbidity, and primary diagnosis.

MATERIAL AND METHODS: We identified patients with primary THA (n=36,984) registered in the Danish Hip Arthroplasty Registry between 1995 and 2002. Data on all changes in vital status for each patient and coexisting morbidity were obtained from The Central Personal Registry and The Danish National Registry of Patients, respectively. The Cox regression analyses were used to estimate the risk of revision (RR) and 95% Confidence interval (CI) adjusting for possible confounding.

RESULTS: In the long term period, males and patients with several comorbidities were in increased risk of revision compared to females and patients without comorbidities (RR=1.2; 95% CI 1.1-1.4 and RR=2.7; 95% CI 2.4-3.2, respectively). Patients with avascular necrosis, paediatric diseases and older than 74 years had an increased risk of revision in the first 30 days postoperatively compared to primary arthrosis or age 60-73 years; however, the difference in survival according to diagnosis disappear in the long term period. Long term risk of revision for patients older than 74 years was decreased (RR=0.8; 95% CI 0.7-0.9), and for patients between 10-49 and 50-59 was increased compared to 60-73 years (RR=1.7; 95% CI 1.3-2.2 and RR=1.3; 95% CI 1.1-1.6, respectively).

CONCLUSIONS: Males and patients having several comorbidities were identified as risk factors of revision in the long term period. More efforts should be done to recognize avascular necrosis, paediatric diseases, and age older than 74 years as risk factors of revision in the first 30 postoperative days.

Effect of HA-coating in pressfit-fixated hemispherical acetabular cups. 3 year follow-up in a prospective consecutive controlled randomized trial.

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INTRODUCTION: HA-coated femoral stems have been proved for better osseointegration than porous coated stems. This study was designed to investigate the performance of HA-coating of the cup in cementless THA.

PATIENTS AND METHODS: In a 20 month period 247 patients had unilateral cementless THA at our clinic. 100 of these patients gave informed consent to participate in a controlled randomized study.

Randomization was performed in the OR after the reaming procedure. The cup was inserted in press-fit fixation (underreaming 2 mm). The standard cup was the porous coated Trilogy® titanium alloy cup. The study cup had a supplementary plasma-sprayed layer of absorbable calcium (Calcicoat® ;70µm thickness; 65% Ca-HA + 35% Ca₃PO₄).

We used a standard polyethylene liner with 10 degrees elevated rim. The femoral component was a cementless porous coated titanium alloy stem (Bi-Metric®), with a modular 28 mm CrCo head. Effect parameter was bone mineral density determined by DEXA scanning

RESULTS: One patient died of unrelated course a few months after the operation. All the remaining patients showed up for 3 year FU examination. Measurements of periprosthetic bone mineral density showed no difference between the two groups after 3 years. Harris Hip Score rose from 53 till 95 in the study group and from 48 till 91 in the control group (ns).

CONCLUSION: In the short term follow-up there do not appear to be any differences between the patients with a HA coated cup and those with a porous coated titanium cup in terms of bone mineral density or clinical outcome. There have been no failures of the HA coated cups and they seem to be an excellent alternative, provided the expected advantages of better sealing of the bone-prosthesis interface, preventing polyethylene induced osteolysis.

The role of acetabulum geometry in the development of osteoarthritis in young men

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INTRODUCTION: The purpose of this study was to examine the role of the geometry of acetabulum in the development of osteoarthritis in young men.

MATERIAL AND METHODS: Men (n=78) aged 26-55 years were selected from the "Dansk Hoftealloplastik Register" (DHR) after having a total hip arthroplasty due to primary osteoarthritis (OA), acetabular dysplasia, congenital dislocation of the hip and "other", during the period from January 1995 to December 2002 at Odense University Hospital (OUH), Svendborg or Middelfart County Hospital. This group was compared to a group of men (n=78) with presumably healthy hips selected from patients of the same age group received as trauma patients at OUH. Anterior posterior pelvic radiographs were evaluated taking into account the degree of pelvic rotation and tilt.

RESULTS: Femoral head coverage (FHC), head-neck offset, center edge angle of Wiberg (CEA), minimal joint space (MJS) and cranial joint space (CJS) were significantly lesser in the case group, acetabular index angle (AIA) and modified ACM-angle of Idelberger and Frank (mACM-angle) were significantly greater. Acetabular angle of Sharp (AA), anterior, posterior and total coverage of femoral head (ACFH, PCFH, TCFH) showed no difference. The frequency of acetabular retroversion was greater among the cases although not significant. 15 out of 26 patients in the study group classified as having primary OA in the DHR actually had acetabular dysplasia.

CONCLUSION: 58 percent of the study group had acetabular dysplasia although not diagnosed in the DHR. OA of young men was associated with a small acetabular coverage, a steep acetabular roof and/or a thickened femoral neck.

Survival of total hip arthroplasty (THA) in younger patients -Effect of hydroxyapatite coating and cement

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INTRODUCTION: Hydroxyapatit (HA) coating of uncemented THA is widely used; however, the effect of HA on implant survival are sparse. We studied the effect of HA coating on the risk of cup or stem revision and compared the results with those of cemented components.

MATERIAL AND METHODS: Using the Danish Hip Arthroplasty Registry, we identified all primary THA in patients less than 70 years during 1997-2003. A total of 8,556 cemented, 3,151 HA-coated and 11,809 non-HA-coated cups and 15,634 cemented, 2,318 HA-coated and 5,482 non-HA-coated stems were available for analyses. We estimated the relative risk (RR) of revision due to aseptic loosening or any cause and adjusted for possible confounding by age, gender, fixation of opposite implant part (cup or stem, respectively) and primary diagnosis using multivariate Cox regression analysis.

RESULTS: The adjusted RRs of revision of HA-coated cups and stems due to aseptic loosening were 0.67 (95% confidence interval (CI):0.29-1.57) and 0.24 (95%CI:0.03-1.79), respectively, with up to 7 years of follow-up when using the survival of non-HA-coated im-plants as references. When taking all causes for revision into consideration, the risk estimates were 0.97 (95%CI: 0.77-1.22) and 0.86 (95%CI: 0.63-1.18) for cup and stem implants, respectively. Ce-mented implants were associated with a higher risk of revision due to aseptic loosening (RR= 3.23 (95%CI: 2.28-4.57), and 4.41 (95%CI: 2.63-7.41)), and due to any cause for stems (RR= 1.24 (95%CI: 1.05-1.48)) but not for cups (RR= 1.00 (95%CI: 0.86-1.16)).

CONCLUSION: Use of HA-coated implants was not associated with any overall reduced risk of revision compared with uncoated implants in a medium term follow-up study. Cemented implants as a group had higher revision rates than cementless implants.

Prospective analysis of peroperative bacterial specimens taken during revision total hip arthroplasty (THA)

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INTRODUCTION: This study was performed to detect how often significant bacterial infection of THA (total hip arthroplasty) occurs in the group of revision-THA, where the preoperative presumptive diagnosis was aseptic loosening.

MATERIAL AND METHODS: We studied the results of cultures from 80 patients from 12-01-1998 to 25-11-2004 that had revisions total hip arthroplasty for presumed aseptic loosening. Kamme-Lindberg biopsy diagnostic procedure was applied to differentiate between infectious and noninfectious loosening of the prosthesis. The diagnosis infection was established when ≥ 3 specimens of 5 were positive with the same bacterial species. Patients receiving antibiotics at the time of collection of specimens for intraoperative culture (or 3 days before the operation) were excluded.

RESULTS: 2 patients (2,5%) were determined to be infected on the basis of positive results according to the defined criteria. The biopsies from the first infected hip had growth in 5 of 5 samples. The bacteria isolated were *Staphylococcus epidermidis* in all 5 samples. The biopsies from the second infected hip had growth in 4 of 5 samples. The bacteria isolated were coagulase-negative staphylococcus in the four samples and in one sample corynebacterium species.

CONCLUSION: The Kamme-Lindberg method provided a standard procedure of separating non-infected patients from unexpected infections in patients with loosening of the prosthesis. The finding of a specific bacterium in ≥ 3 specimens gave a firm support to a combined individual surgical/antibiotic treatment.

Uncemented Total Knee Arthroplasty in Haemophilic Arthropathy

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INTRODUCTION: The aim of this study was to evaluate the shortterm result of uncemented Total Knee Arthroplasty (TKA) in a consecutive series of patients with Haemophilic Arthropathy.

MATERIAL AND METHODS: The study includes all primary TKA's in haemophilic patients during the period 1997-2003. This includes 12 patients, all with severe grade of Haemophilia, and a total of 15 knees. Four of the patients (five knees) are HIV positive. Pre-, per-, and 1-year postoperative clinical and radiographical data were collected prospectively. The prosthesis used was cruciate retaining with a porous titanium coating on all components, i.e. femoral, tibial and patellar (Duracon, Stryker-Howmedica).

RESULTS: Subjective assessment: 8 very satisfied 4 satisfied, 3 non-committal. We found the following mean (+SD) improvement from pre-operative to postoperative: Function score from 34(+/-22) points to 81(+/-14) points; Knee score from 28(+/-22) points to 70(+/-12) points; Pain from 5,2(+/-0,6) points (more than "moderate constant") to 1,5(+/-0,5) points (between "no pain" and "periodically light pain"); Range of Motion from 70,4°(+/-28) to 85,5°(+/-18); Extension defect from 18,6°(+/-11) to 1,9°(+/-2). The stability of all the knees were "very stable" on the mean pre-and postoperative.

Blood loss was mean 812 ml (+/- 689ml), measured in the drain. One patient had a postoperative haematoma that was operatively evacuated. No other complications were seen. There were no signs of loosening of the components.

CONCLUSION: This study shows that uncemented TKA has a satisfying result in terms of Functional score, Knee score, Pain, ROM, Blood Loss and complications. Compared with studies with cemented TKA in Haemophilic patients the uncemented TKA seems to be equally good within the first year.

Vascular endothelial growth factor (VEGF) enhances bone healing in an experimental model of non-union

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INTRODUCTION: Reestablishment of vascularity is an early event in fracture healing, and up-regulation of angiogenesis may therefore promote bone formation in avascular sites, or where angiogenesis limits osteogenesis. Recombinant human vascular endothelial growth factor (rhVEGF) induces angiogenesis in experimental and clinical settings and is the most potent angiogenic factor. We have investigated the capacity of rhVEGF to stimulate bone formation in an experimental atrophic nonunion model.

MATERIAL AND METHODS: Rabbits, divided into 3 groups of 8, underwent a standard nonunion operation that included unilateral mid-tibial osteotomy, excision of periosteum and endosteum, and plate fixation. This was followed by interfragmentary deposition of 100mg rhVEGF delivered in a hyaluronan gel carrier, or deposition of carrier alone, or an autograft.

RESULTS: After 7 weeks, callus size and torsional failure moment of the osteotomy confirmed that rhVEGF-treated osteotomies had united whereas the carrier-treated osteotomies had failed to unite. The biomechanical properties of the rhVEGF-treated and autografted osteotomies were identical. Blood flow at the osteotomy site, measured by radiolabelled microspheres, was no higher in the rhVEGF-treated osteotomies than in the carrier-treated or autografted ones.

CONCLUSION: rhVEGF stimulates the formation of competent bone in an environment deprived of its normal vascularisation and osteoprogenitor cell supply. It could be used to enhance the healing of fractures predisposed to nonunion, such as open tibial shaft fractures.

The routine use of postoperative Tranexamacid (Cyklo-kapron) after knee prosthetic surgery.

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INTRODUCTION: We evaluated the efficacy of one single peroperative Tranexamacid injection in blood conservation after primary knee prosthetic surgery.

PATIENTS AND METHODS: 112 consecutive patients mean ages 70.5 (range 49-87 years) were operated with a total knee prosthesis because of gonarthrosis. A tourniquet was inflated before skin incision, and left without deflation during the operation. The knee capsule was opened by a parapatellar incision. All prostheses used were cemented biotrikompartmental prostheses. One passive subcapsular drain # 14 was left for 24 hours. At knee closure Tranexamacid 10mg/kg body weight max 1 gram was injected i.v. The level of haemoglobin was measured before operation and on day 1 postoperative. Blood transfusion in the postoperative period was considered if the haemoglobin dropped under 6.0 mg/ml.

RESULTS: 108 patients received one Tranexamacid injection. 4 patients did not receive Tranexamacid because of contraindications. No adverse reactions to the administration were noted. The preoperative haemoglobin level of 8.1mg/ml (sd +/- 1.02mg/ml) dropped to 7.33mg/ml (sd +/- 0.77mg/ml) postoperative. 104 patients (92.6%) were managed without blood transfusion. 8 patients received a total of 18 units of bank blood transfusions.

CONCLUSION: The routine use of one single postoperative Tranexamacid injection was introduced in our orthopaedic department with a high compliance, contributing to a low need for blood bank transfusion.

LISS Osteosynthesis of Distal Femoral Fractures. Our Results From The First Twenty Patients.

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INTRODUCTION: We present our experiences with LISS osteosynthesis used in twenty elderly patients with severe osteopenia, having sustained very distal - and/or periprosthetic femoral fractures.

MATERIALS AND METHODS: From June 2003 and through out 2004 we treated 20 patients with 20 fractures. Median age was 74 (57-90) years and most of the patients were disabled with concomitant diseases. Sixteen of the patients were women. Sixteen patients were operated with LISS within two days after the trauma. The rest were operated after more than two weeks due to failed conservative treatment or –retrograde nailing. Fifteen fractures were extraarticular, five were intraarticular and nine were periprosthetic. Only one fracture was open.

RESULTS: The postoperative fracture position remained unchanged in 12 patients with healed fractures and in 5 patients with fractures in healing. One patient died perioperatively and two patients had secondary fracture dislocation due to proximal implant cut-out. There were no hardware failure. Complication: Three patients were re-operated (two patients with implant cut-out and one patient with postoperatively unacceptable fracture position). Two patients sustained a fracture proximal to the LISS plate, one patient had wound problems after a haematoma and one patient had tendovaginitis on the lateral side of the knee.

CONCLUSION: The design of the LISS plate has advantages in retaining distal femoral fractures in elderly patients but the technique also has its disadvantages.

The outcome after whiplash injury

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INTRODUCTION: We evaluate whether the treatments following the initial conventional therapy in the emergency ward had a positive effect on the subjective outcome 2 years after car accident.

MATERIAL AND METHODS: In a 24 months period 266 patients were examined at our emergency ward after a whiplash injury in car accident. 2 years after the end of the registration period a questionnaire was sent to each patient. 188 of the patients responded. 15 patients were excluded because of chronic pain syndromes before the whiplash injury, and 11 of the questionnaires were insufficient. 2 patients had died at the time of the follow up. Finally 162 patients were included in the study. There were 63 men and 99 women with a mean age of 33 years (range 18 to 82 year). Data from both the AE registrations and the questionnaires constitute the information in this study.

RESULTS: Average follow-up time was 36 months (24-48). Re-response rate was 71%. Patients were divided in three groups according to their level of symptoms at the time of the questionnaire. Group 1: 27 who reported themselves completely recovered, group 2: 13 had radiating pain or associated symptoms, but no neck pain, and group 3: 122 had persistent neck symptoms.

Group	N	Conventional therapy	Alternative therapy	Average number of days with soft collar	Average number of days with leave from work
1	27	4	0	1	1
2	13	8	1	0	5
3	122	163	31	22	61

CONCLUSION: Quick return to work and low frequency of additional health services is associated with the best long-term outcome. The study is endangered by selection bias, when a questionnaire concerns about pain, subjects who suffer from pain are more eligible to answer than individuals without pain. But the answers seem to agree with other studies showing the best outcome to the patients that had the least treatment.

Daily rounds by anaesthetists after hip fracture surgery

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INTRODUCTION: Hip fracture patients are often frail and elderly with a high perioperative morbidity and mortality. Efforts to optimize perioperative care through multidisciplinary intervention have mainly focused on orthogeriatric liaisons but have not resulted in significant changes in patient outcome. The early phase of rehabilitation could potentially be better handled through a multidisciplinary effort between anaesthetists and orthopaedic surgeons.

MATERIAL AND METHODS: During the first 25 weeks of 2004, 132 consecutive patients admitted to a hip fracture unit received daily rounds by anaesthetists on the first four postoperative days, on weekdays only. The rounds dealt with all facets of perioperative care. Two hours were allotted daily to the fourteen bed unit for the rounds. The 153 patients admitted to the unit during the similar period of the previous year were chosen as a control group.

RESULTS: The patients in the intervention group received 372 rounds performed by anaesthetists, with an active therapeutical intervention prescribed in 74 % of all rounds. The control group received 142 visits from external medical specialist, which was reduced to 57 in the intervention group ($p=0,01$). Total number of days spent in hospital was median 13 in both groups. In-hospital mortality was 10,5 % in the control group and 7,6 % in the intervention group ($p=0,38$). The rounds by anaesthetists improved nursing care conditions.

CONCLUSION: This study, with insufficient power to show significant differences in outcome, supports the concept of orthopaedic-anaesthetist cooperation in the postoperative phase, and this should be further studied within the context of a randomized clinical trial which should evaluate economic and clinical outcome aspects.

Prediction of postoperative rehabilitation and mortality in hip fracture patients: the cumulated ambulation score

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INTRODUCTION: Prediction of postoperative outcome facilitates the allocation of resources and planning of rehabilitation, which is especially important in as heterogeneous a patient group as hip fractures.

Previous predictors for outcome in hip fracture patients have predominantly focused on prefracture patient status. The present study validates the cumulated ambulation score (CAS) as an early postoperative predictor for short-term outcome in hip fracture patients.

MATERIALS AND METHODS: In a prospective, descriptive study, 300 consecutive, unselected hip fracture patients were admitted to a special hip fracture unit. All patients were treated according to a well-defined care plan with multimodal rehabilitation. Outcome parameters were compared to the CAS, which consists of a cumulated assessment of simple ambulation characteristics during the first three postoperative days providing a score from 0-18. The CAS was compared to the New Mobility Score¹.

RESULTS: The CAS was a highly significant predictor for length of hospitalization, discharge status, 30-day mortality and postoperative medical complications in hip fracture patients. A CAS of >10 on the third postoperative day gives a positive predictive value of 78 % for the discharge of the patient within 2 weeks postoperatively, a 99 % prediction that the patient will be alive at one-month postoperatively, a 94% prediction that the patient will not suffer from major postoperative medical complications and a 91% prediction that the patient will be discharged home. The CAS was superior to the New Mobility Score in predicting short term outcome.

CONCLUSIONS: The CAS may represent a clinically relevant, easily applicable score for early prediction of the rehabilitation potential, facilitating optimal allocation of existing resources in the orthopaedic ward.

Evaluation of foot dysfunction by electro-goniometry, - a novel quantitative method

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INTRODUCTION: The elasticity and dynamics of the foot are decisive for its shock absorbance. Cavus foot and functional over-pronation relates to malalignment injuries in the foot, lower leg and more proximal parts of the locomotive system. In previous studies of this relationship only semi-quantitative methods have been applied. Development of a clinically applicable quantitative method for evaluation of foot dynamics during walking was the purpose of this study.

MATERIAL AND METHODS: A novel method for evaluation of dynamic navicular drop (DND) and calcaneal angle variation (CAV) was developed. It includes a photometric measurement of the static navicular height and calcaneal angle and a dynamic measurement of DND and CAV by electro-goniometry. Fifteen volunteers were examined at 3 different speeds (2.0, 4.5 and 5.5 km/h) in a test-retest paradigm.

RESULTS: The static navicular height was 36-63 mm (51+/- 7 mm) and navicular drop ranged between 9 and 15 mm (14+/- 2 mm). The static calcaneal angle ranged between 2 and 10 degrees (6 +/- 4 degrees) and the CAV ranged between 8 and 33 degrees (20+/- 5 degrees). A significant negative correlation between static navicular height and DND was demonstrated. The magnitude of both calcaneal and navicular movement increased with increasing velocity indicating that various loading is important in the quantitative analysis of foot malalignment.

CONCLUSION: A novel method for quantitative evaluation of foot dynamics based on photometry and electro-goniometry was developed and evaluated. It was found reliable and applicable for evaluation of foot malalignment and the effect of treatment.

In vivo three-dimensional midfoot kinematics

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INTRODUCTION: The aim of the present study was to describe the combined mobility of the hindfoot and the midfoot in vivo in relation to the level of foot pronation.

MATERIAL AND METHODS: Fifteen volunteers participated in the study. Midfoot motion was recorded during standing, walking and voluntary full range ankle joint movements. The level foot pronation was determined as the height of the medial arch of the foot using digital photography and electrogoniometry. Relative three-dimensional hindfoot and midfoot motion was determined using motion analysis. Clusters of reflective markers were mounted on 2mm thick Kirschner wires inserted during local anaesthesia in tibia, calcaneus and navicula.

RESULTS: The static navicular height ranged between 30 and 60mm representing a wide range of medial arch architectures. The dynamic navicular drop ranged between 14 and 61% of the reference navicular height during walking. The largest total calcaneo-navicular range of motion was observed in inversion-eversion (mean 30 SD 10deg). During walking the calcaneo-navicular ROM was between 60 and 70% of the total ROM with no significant differences between the movement directions. No significant correlations were found between the level of pronation and the ROM in any direction tibio-calcaneal and calcaneo-navicular movement.

CONCLUSION: Due to inter-individual variation in: joint geometry, ligament architecture and mechanical properties, architecture of muscle-tendon attachments, muscle strength and coordination it seems that foot pronation is achieved inter-individually through a wide range of combinations of mid- and hindfoot rotations.

Ten years follow up of longstanding adductor-related groin pain in athletes.

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INTRODUCTION: Adductor-related groin pain is a frequent problem in athletes with an incidence between 8-18%. It is known to cause longstanding problems that might even sideline the athlete permanently. Results of a randomised clinical trial (Lancet 1999; 353: 439-443) have shown a specific training programme to be highly effective in the treatment of adductor-related groin pain.

MATERIAL AND METHODS: The above mentioned RCT took place between 1991 and 1995 and compared an active physical training programme with a conventional physiotherapy programme without active training. 59 male athletes aged 18-50 years participated. The purpose of the present study was to follow up on these 59 athletes 8 to 12 years after they finished the treatment. A questionnaire was filled out by the participants. They were examined by a blinded observer using the same examination technique used in the primary study. New radiographs and bone scintigrams have been taken to follow the development compared to the primary images. The same outcome measures and subjective global assessment as used in the primary study have been used.

RESULTS: 48 participants of the primary study have been examined (80%). Mean follow up is 10 years. The athletes have decreased activity level, but mainly for other reasons than groin pain. The treatment outcome is still in favour of the active physical training programme after 10 years. These results will be correlated to the radiographic and scintigraphic bone changes, which in some cases are reversible within the time gap of ten years.

CONCLUSION: The results indicate that the benefit of the active physical training programme is of long-term value to athletes with adductor-related groin pain. Radiographic and scintigraphic bone changes might in the future be of value.

Reconstituted bovine bone protein lyophilisate enhances fixation of experimental allografted gap implants

*Jørgen Baas, Anders Lamberg, Brian Elmengaard,
Thomas Bo Jensen, Kjeld Søballe*

Ortopædisk Forskningslaboratorium E, Århus Sygehus

INTRODUCTION: Insufficient bone stock in implant situations can be managed with bone allografting. This study investigates whether the fixation of grafted orthopedic implants can be improved by adding an extract of bovine cortical bone, Colloss® (Ossacur AG, Germany) containing reconstituted collagen type 1 and a range of bone-specific proteins.

MATERIAL AND METHODS: In a controlled paired animal study, cylindrical (6x10mm) unloaded porous-coated Ti with a 2,5mm gap was inserted in the femoral condyles of 16 dogs.

The 64 implants were divided into four groups: The control group with allograft alone and three groups with allograft mixed with 10, 20 or 40 mg Colloss. One ccm of morselled bone allograft was used for each gap in all implantation sites. The implants were evaluated by blinded mechanical push-out test and histomorphometry after a 4-week observation time.

RESULTS: Superior mechanical fixation was seen for implants with allograft added Colloss. Furthermore, we found the best mechanical fixation in the 10 and 20 mg Colloss groups. In these concentrations, mechanical fixation improved by 50 to 100% in all mechanical parameters ($p < 0.05$).

By histomorphometry, we found a 10-fold decrease in fibrous tissue formation in the Colloss-treated implants, along with an increased new bone formation. This was seen both on the implant surface as well as in the surrounding gap.

CONCLUSION: Colloss enhanced the mechanical fixation of experimental allografted gap implants. It nearly eliminated fibrous tissue formation and increased new bone ingrowth and ongrowth. This could prove useful in clinical settings where allograft is needed for implant support in sites with insufficient bone.

Serum metal ion concentrations in THA. A prospective randomized study of three different bearing material combinations.

*Klaus Harager (1), Arne Borgwardt (1), Søren Ribel-Madsen
(2), Bente Gammelgaard (3)*

1) Orthopaedic Dept. Frederiksberg University Hospital.

(2) Parker Institute Frederiksberg University Hospit (3) Institute of
Analytical Chemistry Danish University of Pharmaceutical Sciences.

INTRODUCTION: Degradation products of prosthetic materials in total joint replacement have been related to aseptic loosening. The toxicities of the metals used in the implants have been of special interest as these are known to be toxic in high concentrations. Another aspect would be elevated metal ion concentration due to fretting corrosion in the cement/stem interface, which is difficult to demonstrate at an early stage in the loosening process.

MATERIALS AND METHODS: Three years postoperatively we have measured the ion concentrations in serum of 100 consecutive patients who have had a primary THA in a prospective randomized study of three different bearing material combinations: CoCr-CoCr, Alumina-Alumina and Zr-UHMWPE. The metals analysed were titanium, aluminium, cobalt, chromium, molybdenum, nickel and zirconium. The new analysis method was ICP-MS (Inductively Coupled Plasma Mass Spectrometry). This method allows several metal ions to be measured simultaneously.

RESULTS: In the group randomized to CoCr-CoCr bearing there was a significant increase in serum levels of Cr and Co. The elevated titanium levels were found in patients complaining of pain in the hip. One patient was revised due to loosening between stem and cement. The high titanium levels in this patient were normalized postoperatively.

CONCLUSION: This study presents a valid method for simultaneously analysing numerous metal ion concentrations in serum. High concentrations of Cr and Co in patients with a modern metal on metal bearing using new alloys may be of some concern due to the toxicity of these metals. Taking the ion release from the bearing materials into consideration, the highly elevated metal ion concentrations might be used as an indicator for fretting corrosion in the implants, which could indicate stem loosening or impingement.

Topical bisphosphonate treatment increases fixation of implants inserted with bone compaction. 12 weeks canine study

*Thomas Jakobsen, Søren Kold, Joan E. Bechtold,
Brian Elmengaard, Kjeld Søballe*

Orthopaedic Research Laboratory, Aarhus University Hospital

INTRODUCTION: A new bone preparation technique, bone compaction, has shown to increase implant fixation. Bisphosphonate (BP), a potent inhibitor of bone resorption, has shown to increase the amount of bone around implants inserted with the bone compaction technique after four weeks. Even though mechanical implant fixation was not increased after four weeks, it may be that the non-vital bone, due to osteoconductive properties, will increase longer-term implant fixation. Therefore, this study investigated whether topical application of bisphosphonate combined with compaction would improve mechanical implant fixation after 12 weeks.

MATERIAL AND METHODS: Ten dogs were used in this paired study. Two porous coated titanium implants were inserted in each dog, one in each proximal tibia. The bone was prepared with the compaction technique; by radially enlarging an initial 5.0 mm drill hole to 8.0 mm. Before insertion of the implants, the right cavities were soaked for 1 minute with alendronate solution (BP) and the left cavities with saline (control). The observation period was 12 weeks. Implants were evaluated by biomechanical push-out test.

RESULTS: Biomechanical results. Data are presented as mean and CI 95%. * $p < 0.05$.

	Max shear strength, MPa	Apparent shear stiffness, MPa/mm	Total energy absorption, J/m ²
Bisphosphonate	7 (5-8)*	24 (18-29)*	1686 (1242-2130)*
Control	3 (2-4)	12 (7-17)	951 (525-1376)

CONCLUSION: Topical bisphosphonate treatment resulted in a two-fold improvement of mechanical implant fixation. The marked improvement in implant fixation after 12 weeks suggest a positive effect of adding topical bisphosphonate to the compaction technique.

Cartilage thickness in the hip joint measured by MRI and stereology

*I Mechlenburg*¹, *JR Nyengaard*², *J Gelineck*³, *K Søballe*¹
1 Department of Orthopaedics, University Hospital of Aarhus, Denmark, 2 Stereology and Electron Microscopy Laboratory, University of Aarhus, Denmark, 3 Department of Radiology, University Hospital of Aarhus, Denmark

INTRODUCTION: Periacetabular osteotomy is performed in dysplastic hips and the result of surgery is largely dependent on the degree of preoperative osteoarthritic involvement. As periacetabular osteotomy is performed on dysplastic hips to prevent osteoarthritic progression, changes in the thickness of the articular cartilage is a central variable to evaluate. For this purpose we developed a method by which the thickness of the articular cartilage in the hip joint can be quantified based on Magnetic Resonance Imaging (MRI) and 3D design-based sampling principles (stereology).

MATERIAL AND METHODS: Twenty six dysplastic hips on twenty two females and four males were MR scanned preoperatively. The first 13 patients were examined twice, with complete repositioning of the patient and set-up in order to obtain an estimate of precision of the method used. To show the acetabular and femoral cartilages separately, an ankle traction device was used during MRI. This device pulled the leg distally with a load of 10 kg.

RESULTS: The mean thickness of the acetabular cartilage was 1.26 mm, SD 0.04 mm and CV 0.03. The mean thickness for the femoral cartilage was 1.18 mm, SD 0.06 mm and CV 0.05. The precision calculated as the coefficient of error of the mean was estimated for the thickness of the acetabular cartilage 0.01 and femoral cartilage 0.02. The measurements took 15-20 minutes per hip to carry out.

CONCLUSION: The described method is an unbiased and precise method for quantifying the thickness of the articular cartilage in the hip joint. We suggest that the method can be advantageous for assessing the progression of osteoarthritis in dysplastic hips after periacetabular osteotomy.

DOS forårsmøde 12. – 13. Maj 2005 Aalborg Kongres & Kulturcenter

Møder i forbindelse med Forårsmødet

Torsdag den 12. maj 2005

- 09:00-12:00 Dansk Selskab for Håndkirurgi: Behandling af reumapatienter kirurgisk og medicinsk
- 09:00-12:00 Dansk Ortopædkirurgisk Traumeselskab: Bestyrelsesmøde og symposium
- 10:00-12:00 Dansk Fod- og Ankelkirurgisk Selskab
- 10:00-12:00 Dansk Selskab for Hofte- og Knæalloplastik kirurgi
DSHK generalforsamling og MIS knæalloplastik
- 10:00–12:00 Dansk Børneortopædisk Selskab
- 11:00-12:00 Ryginteressegruppen

Dansk Selskab for Håndkirurgi

I forbindelse med DOS Forårsmøde i Aalborg afholdes møde i Dansk Selskab for Håndkirurgi

Tidspunkt : Torsdag 12.05.05, kl. 09.00 - 12.00

Emne: Reumapatienter og håndkirurgi. Ergoterapeutforeningen er arrangør af det videnskabelige møde.

Præliminært program:

09:00 - 09:05 Velkomst

09:05 - 10:05 Nyeste behandling af patienter med reumatoid artrit. Betydningen af tidlig diagnosticering.
Professor dr.med. Kristian Stengaard-Pedersen.

10:05 - 10:30 Kaffepause

10:30 - 11:00 Fingerleds proteser, specielt MCP- og PIP-led.
Overlæge Allan Ibsen Sørensen.

11:00 - 11:30 Genoptræning af reumapatienter efter indsættelse af fingerproteser. Hvordan foregår det på Århus Sygehus og på Rigshospitalet (evt).
Specialeergoterapeut Inge Hellberg Århus og Ergoterapeut fra RH (evt)

11.30 - 12:00 Diskussion og evt. frie foredrag

Abstracts til frie foredrag kan fremsendes til sekretæren i Dansk Selskab for Håndkirurgi, overlæge Karsten Krøner, Ortopædkirurgisk afdeling, Håndkirurgisk Sektion, Århus Sygehus senest 28.04.05.

DOT's minisymposium EKSTERN FIKSATION

Åbent bestyrelsesmøde og efterfølgende minisymposium i DOTS ved forårsmødet. Sted: Aalborg den 12/5 2005 kl. 9.00.

Program:

9.00-10.30: Åbent bestyrelsesmøde med følgende punkter.

1. Valg af referent og dirigent.
2. E-kursus i bækkenkirurgi.
3. Minisymposium til Årsmødet om hofte-nære frakturer.
4. DRG takster ved traumekald.
5. Den Traumatologiske uddannelse.
6. Eventuelt.

10.30-12.00: Minisymposium om EKSTERN FIKSATION

- | | |
|-----------------------------------|------------------------|
| 1) Biomekanik | v/ Klaus Kjær Petersen |
| 2) Håndledsfrakturer | v/ Marianne Bredddam |
| 3) Tibiakondyl- og Pilonfrakturer | v/ Preben Lass |
| 4) Knoglerekonstruktion | v/ Knud S. Christensen |
| 5) Pinhygiejne | v/ Susanne Jølck |
| 6) Diskussion | Alle |

Interesserede i traumatologi kan indmelde sig i **Dansk Ortopædisk TraumeSelskab (DOTS)** ved at kontakte Kasserer Charlotte Buch Gøthgen; E-post: cbg@dadlnet.dk

DFAS: Dansk Fod- og Ankelkirurgisk Selskab

Holder møde torsdag d. 12.05.05 kl. 10:00 – 12:00

Titel: Behandling af Den Neuromuskulære fod/ankel:

- 1) Elektrisk stimulation: Prof. Chr. Sinkjær Aalborg
- 2) Den klassiske kirurgiske behandling: Prof. Bertil Romanus
Gøteborgs Universitet

DSHK

Dansk Selskab for Hofte- og Knæalloplastik Kirurgi

3. Ordinære Generalforsamling

Torsdag 12. maj 2005 kl. 11.30

Aalborg Kongres & Kulturcenter

- 1) Dagsorden
- 2) Valg af dirigent.
- 3) Godkendelse af referat fra 2. ordinære generalforsamling 13. maj 2004. Referatet er tidligere udsendt til medlemmerne og findes på hjemmesiden www.dshk.org
- 4) Formandens beretning.
- 5) Fremlæggelse af regnskab og budget til godkendelse.
- 6) Behandling af indkomne forslag.
- 7) Fastsættelse af kontingent.
- 8) Valg til bestyrelsen.
Per Kjærsgaard-Andersen afgår efter tur og er villig til genvalg
Henrik Schrøder afgår efter tur og er villig til genvalg
Niels Wisbech Pedersen afgår efter tur, men ønsker ikke genvalg
Bestyrelsen foreslår Christian Pedersen til denne post
Til suppleantposten foreslås Henrik Husted
- 9) Valg af revisor
- 10) Eventuelt.

Jens-Erik Varmarken

DSHK
Dansk Selskab for Hofte- og
Knæalloplastik Kirurgi

12. maj 2005 kl. 10.00-11.30
Aalborg Kongres & Kulturcenter

Symposium

Chairman: Niels Wisbech Pedersen

- 1) MIS og Navigation ved Total Knæalloplastik Kirurgi.
60 min
Mr. Sandeep K. Chauhan, F.R.C.S., UK

- 2) Danske erfaringer med Navigation ved TKA
20 min

- 3) Diskussion
10 min

Jens-Erik Varmarken

Dansk Børneortopædisk Selskab

Medlemsmøde og generalforsamling

Aalborg Kongres & Kulturcenter
Den 12.5.2005, kl. 10:00 – 12:00

Medlemsmøde og generalforsamling

Dagsorden

- 1) Valg af dirigent
- 2) Formandens beretning
- 3) Udvalgsberetninger
- 4) Fremlæggelse af regnskab og budget til godkendelse
- 5) Fastsættelse af kontingent
- 6) Eventuelt

Der vil som sædvanlig blive lejlighed til faglig diskussion af ”troublesome cases”, ligesom kommende formelle krav til uddannelse i børneortopædi igen vil være til debat.

Med venlig hilsen

Adam Hede

"Ildrætsmedicinsk Golfsymposium i relation til forebyggelse og skadesforhold i Golf "

Målgruppe:

Golftrænere, fysioterapeuter og læger med interesse for golf

Kursusformål og indhold:

Kursus er planlagt til at være en kombination af teori og praksis.

Golfturnering som optakt til kursus (for de der ønsker at deltage, ikke en betingelse for deltagelse)

Golf som motion og/eller elitesport

Golf til forskellige aldersgrupper

Hvordan ser skadesmønstrene ud for golfspillere og hvordan kan der forebygges?

Hvordan tilrettelægges træningen bedst?

Biomekaniske aspekter i forhold til golf

Undervisere:

Ildrætsmedicinske ressourcepersoner samt ressourcepersoner indenfor golf.

Tid og Sted:

Den 20. og 21. maj. Fredag startes for de morgenfriske med Golfturnering. Det er ikke en forudsætning for deltagelse på Symposiet at deltage i golfturneringen.

Selve Golfsymposiet starter med frokost kl. 13.00 og slutter lørdag kl. 16.30.

Kursusstedet er Byggecentrum, Hindsgavl Allé 2, 5500 Middelfart.

Yderligere oplysninger får hos Lisbeth Vinzents l-vinzents@dadlnet.dk

Dansk Selskab for Artroskopisk Kirurgi og Sportstraumatologi

afholder det 6. kursus i Basal Artroskopi
Den 7. - 9. juni, 2005 på Panuminstituttet, København

Indhold

Kurset omfatter undervisning i den artroskopiske diagnostik og den artroskopiske kirurgi af de hyppigst forekommende skader og kroniske tilstande i skulder-, knæ- og ankelled. Den teoretiske undervisning (én dag) suppleres med praktiske øvelser (2 dage) på henholdsvis kadavere (knæ og ankel).

Målgruppe

Yngre læger under uddannelse til speciallæge i ortopædkirurgi, der befinder sig enten i en introduktionsstilling eller i en ortopædkirurgisk blokstilling.

Fællesemner

For både skulder-, knæ- og ankelleddet:

1. Introduktion til instrumenter, udstyr og adgangsportaler.
2. Den artroskopiske anatomi, leddets biomekanik.
3. Komplikationer til artroskopian.

Kursussted

Panuminstituttet, København.

Den teoretiske undervisning foregår i auditorium. Øvelser foregår i Dis-sektionssalen.

Deltagerafgift

For medlemmer af SAKS: 1.700 kr.

For ikke-medlemmer af SAKS: 2.100 kr.

Tilmelding: On-line på SAKS hjemmeside og tilmelding gælder fra betalingsdato. Se www.SAKS.nu

Information

Lars Blønd

Ortopædkirurgisk afd. T

Amtssygehuset i Gentofte

e-mail: larblo01@gentoftehosp.kbhamt.dk

Hoftesymposium

den 10. og 11. juni 2005

På Rigshospitalet afholdes hoftesymposium jf. program i DOS bulletin nr 2, 2005.

Kursusafgift for medlemmer af Dansk Ortopædisk Selskab kr. 950,00.

Tilmelding og indbetaling af kursusafgift til:

Lægeseekretær Janne Elholm Tlf.: 3545 3371
Ortopædkirurgisk Klinik, Fax: 3545 6733
afsnit 2162 Rigshospitalet E-mail: elholm@rh.dk
Blegdamsvej 9
2100 København Ø

Tilmeldingen regnes kun for gældende, såfremt den er ledsaget af kursusafgiften i form af check stilet til ovenstående, alternativt overførsel til reg.nr. 3156 konto 3156150983 med klar identifikation på indbetalingen.

Tilmeldingen bedes foretaget på nedennævnte slip eller tilsvarende oplysninger fremsendt på anden måde.

Deadline for tilmelding 10.5.2005

Jens Retpen & Jens Stürup

Tilmelding til hoftesymposium 10. - 11. 06. 2005 på Rigshospitalet

Navn: _____

Titel: _____

Arbejdssted: _____

Adresse _____

Privat: _____

Tlf.: _____

E-mail-adrese: _____

Betalingsmåde:

Check:

Bankoverførsel 3156 konto 3156150983 med
klar identifikation på indbetalingen og indbetaler!

ARTICULUM essay Prize

In Musculoskeletal Medicine for Medical Students

The ARTICULUM Medical Student Prize, valued at £500, will be awarded for what is judged to be the best essay written by a medical student that gives an account of a piece of work that has given them a better understanding of an aspect of the impact of arthritis and other musculoskeletal conditions and how to improve musculoskeletal health.

This investigation may be a literature review, structured review of case notes, or an audit or case studies related to a clinical attachment. It should be a structured essay of up to 5000 words, with a maximum of 50 references.

This award aims to raise awareness in medical training of the burden of musculoskeletal conditions, and the options for prevention and treatment

The closing date for entries is Thursday, 30th June 2005

The essay will be judged by an expert international panel of ARTICULUM members. ARTICULUM is a Pfizer-sponsored scientific programme that aims to promote excellence in, information exchange, education, training and disease management in arthritis and pain.

ARTICULUM reserves the right in exceptional circumstances to award more than one prize or not to make an award depending on the standard of submissions.

Essays should be prepared in Microsoft Word format and submitted via e-mail to articulum@ppsiuk.com. All essays must be accompanied by a complete application form which can be downloaded from [www. Articulumessayprize.com](http://www.Articulumessayprize.com).

The winning essay(s) will be displayed at:
www.articulumessayprize.com from 15 August 2005