DOS BULLETIN

NR. 6 OKTOBER 2006 35. ÅRGANG

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
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Web-page
www.ortopaedi.dk

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DEADLINES FOR NÆSTE BULLETIN

ANNONCER: Fredag den 17. november 2006
TEKST: Fredag den 1. december 2006

Møder i forbindelse med Årsmødet Radisson SAS Scandinavia Hotel København

Torsdag d. 27.10.05

DOT: Dansk Ortopædisk Traumeselskab	**10:00 - 12:00**
Ryginterressegruppen	**10:00 - 12:00**
Dansk Fod- og Ankelkirurgisk Selskab (DFAS)	**10:00 - 12:00**
DSHK (Dansk Selskab for Hofte- og Knæalloplastikkirurgi)	**10:00 - 12:00**
Dansk Børneortopædisk Selskab:	**10:00 - 12:00**

Andre Faggruppemøder omkring DOS mødet:

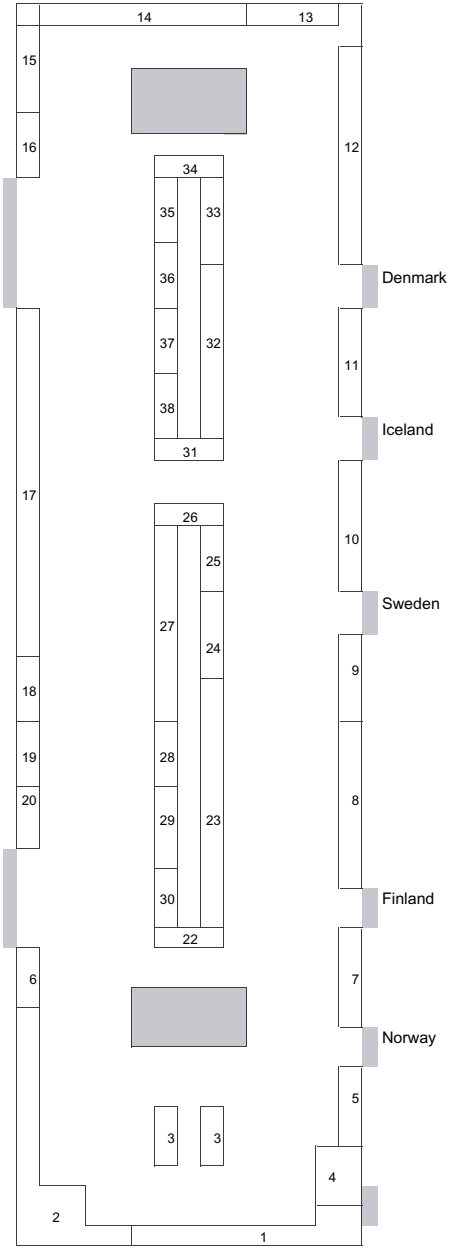
Dansk Selskab for Håndkirurgi
Efterårsmøde og generalforsamling onsdag d. 26.10.05 kl.
13:00 - 18:30 Hansens Gamle Familiehave,
Pile Allé 10-12, 2000 Frederiksberg.

Se evt. program sidst i bladet.

Udstillere

Udstiller	*Stand nr.*	*Areal*
Allergan	19	3 m²
Biomet Danmark	23	12 m²
B. Braun Medical A/S	15	4 m²
ConvaTec	26	3 m²
Creamer Medical	35	3 m²
dj Orthopedics Nordic ApS	5	4 m²
Fischer Medical	31	3 m²
Genzyme A/S	6	3 m²
GlaxoSmithKline	10	6 m²
Hemax Medical ApS	24	4 m²
Interface Biotech A/S	9	4 m²
Johnson & Johnson A/S	30	3 m²
KEBO MED A/S	13	4 m²
MEDA A/S	34	3 m²
Medical Vision Res. & Dev. AB	20	3 m²
Medtronic Danmark A/S	25	3 m²
Mærsk-Andersen A/S	28	3 m²
Mølnlycke Health Care	7	5 m²
N.C.Nielsen Hospitalsudstyr A/S	22	3 m²
Nordic Medical Supply OP	3	6 m²
Nordic Medical Supply ORTO	2	20 m²
Nordic Medical Supply ENDO	1	12 m²
Olympus Danmark A/S	36	3 m²
Ortoconcept Scandinavia	11	5 m²
Ortotech	32	8 m²
Osmedic ApS	33	4 m²
Ossano Scandinavia AB	38	3 m²
Pro-Meduc A/S	37	3 m²
Protesekompagniet	17	16 m²
Sawbones Europe AB	4	6 m²
Scandinavian Customized Prosthesis	18	3 m²
Smith & Nephew A/S	12	10 m²
Sports Pharma OrtoSupport ApS	16	3 m²
Stryker Danmark	14	9 m²
Swemac Orthopaedics AB	27	9 m²
Synthes A/S	8	8 m²
Viking Medical Scandinavia ApS	29	4 m²

Udstilling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Mødeoversigt

Torsdag 26. oktober

Room A	Room B
13:00 - 14:30 **Traumatologi og Rygkirurgi (Foredrag)**	*13:00 - 14:30* **Eksperimentel ortopædi og fodkirurgi (Foredrag)**
14:30 - 15:30 ***Udstilling og Kaffe***	
15:30 - 16:30 **Guildal forelæsning** **Fodens kirurgiske lidelser** *Professor Sandro Giannini* *16:30 - 17:00* **Guildal uddelinger**	
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 27. oktober

Room A	Room B
08:30 - 09:00 **Presidential Guest Lecture "Non-Unions"** *Professor Galal Zaki Said* *09:00 - 10:30* **Symposium: Den nye specialeplanlægning**	
10:30 - 11:30 ***Udstilling og Kaffe***	
11:30 - 12:30 **Foredragskonkurrence**	
12:30 - 13:30 ***Frokost***	
13:30 - 15:00 **Sportstraumatologi og Knækirurgi (Foredrag)**	*13:30 - 15:00* **Poster Session**
15:00 - 16:00 ***Udstilling og Kaffe***	
16:00 - 17:30 **Eksperimentel ortopædi og hoftekirurgi (Foredrag)** *17:30* **Uddelinger: DOS Fonden Bedste foredrag og bedste poster**	

Torsdag 26. oktober

13:00 - 14:30: Sal A:

Traumatologi og rygkirurgi

Chairmen: Michael Nielsen & Søren W. Rasmussen **Side**

Torsdag 26. oktober

13:00 - 14:30: Sal A: (cont.)

Traumatologi og rygkirurgi

Chairmen: Michael Nielsen & Søren W. Rasmussen **Side**

Torsdag 26. oktober

13:00 - 14:30 Sal B:

Eksperimentel ortopædi og fodkirurgi

Chairmen: Marianne Breddam & Lars Bo Ebskov **Side**

Torsdag 26. oktober

13:00 - 14:30 Sal B: (cont)

Eksperimentel ortopædi og fodkirurgi

Chairmen: Marianne Breddam & Lars Bo Ebskov **Side**

Torsdag 26. oktober

15:30 - 16:30 Sal A:

Guildal forelæsning:

Professor Sandro Giannini

Professor of Orthopaedics and Traumatology
University of Bologna

"Fodens kirurgiske lidelser"

16:30 - 17:00 Sal A:

Uddelinger fra Guildal Fonden

19:00 - ???

Galla fest !!!

Fredag 27. oktober

08:30 - 09:00 Sal A:

Presidential Guest Lecture:

Professor Galal Zaki Said

Professor Orthopaedic Surgery
Assiut University Egypt

"Non-Unions"

09:00 - 10:30 Sal A

Symposium:
Den nye specialeplanlægning

Velkomst:	*Cody Bünger*	-	Formand DOS
	Niels W Hansen	-	Enheden for Planlægning Sundhedsstyrelsen,
	Niels D. Röck	-	Adm. Overlæge OUH
	Benn Duus	-	Adm. Overlæge H:S - BBH.
Diskussion:	*Cody Bünger*		Moderator

Fredag 27. oktober

11:30 - 12:30 Sal A:

Bedste foredrag

Chairmen: Marianne Lind, Søren Overgaard, Cody Bünger **Side**

Fredag 27. oktober

11:30 - 12:30 Sal A: (cont)

Bedste foredrag

Chairmen: Marianne Lind, Søren Overgaard, Cody Bünger **Side**

Fredag 27. oktober

13:30 - 15:00 SAL A:

Sportstraumatologi og knækirurgi

Chairmen: Bent Wulff Jakobsen & Per Hölmich **Side**

Fredag 27. oktober

13:30 - 15:00 SAL A: (cont)

Sportstraumatologi og knækirurgi

Chairmen: Bent Wulff Jakobsen & Per Hölmich **Side**

Fredag 27. oktober

13:30 - 15:00 SAL B:

Poster session

Chairmen: Per Kjærgaard-Andersen & Lars Konradsen **Side**

Fredag 27. oktober

13:30 - 15:00 SAL B: (cont)

Poster session

Chairmen: Per Kjærgaard-Andersen & Lars Konradsen **Side**

Fredag 27. oktober

16:00 - 17:30 Sal A:

Eksperimentel ortopædi og hoftekirurgi

Chairmen: Ole Rahbek & Poul T. Nielsen **Side**

Fredag 27. oktober

16:00 - 17:30 Sal A: (cont)

Eksperimentel ortopædi og hoftekirurgi

Fredag 27. oktober

17:30 - 18:00

Sal A: Uddelinger:

DOS-Fonden
Bedste Foredrag
Bedste Poster

Kl: 18:00 DOS-mødet er slut

Forum for uddannelsesansvarlige overlæger

Forum for de uddannelsesansvarlige overlæger og alle andre interesserede vil ved efterårsmødet som aftalt blive placeret dagen før selve DOS mødet så vi kan holde et langt uforstyrret møde uden alt for mange konkurrerende møder og subspeciale forsamlinger.

Onsdag d. 25.10.06 kl: 13:00 - 17:00
Radisson SAS Scandinavia Hotel

Forum er et åbent møde hvor alle der ønsker det vil have mulighed for at komme med spørgsmål meddelelser information og specielt fortælle om gode eller besværlige uddannelsesforløb og løsningen af disse.

Der vil ikke være nogen egentlig dagsorden fra uddannelsesudvalgets side. Der vil være oplæg om:

Intro-læger: *Søren Overgaard* (Professor OUH)
Kompetencekort: *Doris Østergaard*
(PKL Postgraduat klinisk lektor)

Den egentlige dagsorden formes undervejs

MØD TALSTÆRKT OP

Uddu

Referat

Møde: 1. møde i Forum for Uddannelsesansvarlige Overlæger
Mødetidspunkt: Torsdag d. 18. maj 2006
Mødested: Hotel H.C. Andersen, Odense

Mødedeltagere:
Claus Møger, Magne Juul, Thomas Lind, Peter Lyndrup, Søren Bødtker, Kim Holk, Thomas Bjerrum, Steen Olsen, Pernille Leicht, Kirstin Pedersen, Per Jespersen, Ole Rahbek, Thomas Bo Hansen, Stig Jacobsen, Hans Boie, Per Jensen, Knud Søndervig, Allan Buhl, Hans Ri Jørgensen, Hans Peder Jensen, Uddannelsesudvalget samt Bestyrelsen.

Referat
Dansk Ortopædisk Selskab havde taget initiativet til afholdelse af det første møde i forum for uddannelsesansvarlige overlæge og andre interesserede i forbindelse med Forårsmødet i Dansk Ortopædisk Selskab, den 18. maj 2006 i Odense.
Søren Overgaard bød velkommen til det første møde. Oprettelse af dette forum for uddannelsesansvarlige overlæger har det overordnede formål at forbedre uddannelsen for såvel introduktions- som hoveduddannelsesstillingerne. Møderne skal skabes af deltagerne, og der var enighed om et stort behov for at tale med ligesindede.

Ved præsentationsrunden fremkom det, at en række af de uddannelsesansvarlige overlæger ikke har afsat tid i dagligdagen til at udføre arbejdet, medens andre har det mere skemalagt.

Herefter blev en række punkter diskuteret, herunder

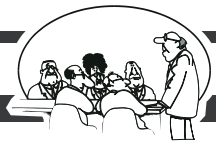
1) Logbog
2) Vejlederrollen
3) Skæve forløb
4) Evalueringsmetoder
5) Fif

Herudover blev forskellige former for synliggørelse af økonomien i uddannelsen fremlagt.

Herefter blev godkendelse af introduktionsstillingerne diskuteret. En godkendelse af introduktionsstillinger er nøgle til at indgå i den ortopædkirurgiske speciallægeuddannelse, og det er særdeles vigtigt at denne godkendelse sker på et ordentligt grundlag inden for alle lægeroller.

Formen for de næste møder blev diskuteret. Der var enighed om halvårlige møder i forbindelse med DOS-møderne. Ved næste møde - Årsmødet i København i 2006 - blev det aftalt, at mødet afholdes **onsdag over middag.** Emnerne, der vil blive behandlet, vil endeligt blive aftalt ved Uddannelsesudvalget, og medlemmerne kan forvente at få opgaver omkring indlæg ved de kommende fora.
Hans Boie ville tage initiativ til at oprette en mailingliste, som Uddannelsesudvalget kan anvende i forbindelse med udsendelse af information.

Søren Overgaard
Afgående formand for Uddannelsesudvalget, maj 2006



DANSK ORTOPÆDISK SELSKAB
Danish Orthopaedic Society

DOS Fellowship

Formål: Styrke ortopædkirurgisk forskning og uddannelse ved at yde økonomisk støtte til forsknings- og uddannelses-ophold ved anden ortopædkirurgisk afdeling eller forsk-ningsinstitution.

Varighed: DOS Fellowship har typisk en varighed på op til 3 måneder

Beløb: Tildelt beløb kan sædvanligvis ikke overskride 100.000 kr

Kriterier: Ansøger skal på ansøgningstidspunkt være :
a. Medlem af DOS
Ansat i ortopædkirurgisk Introduktionsstilling, Hoveduddannelse eller under ortopædkirurgisk videreuddannelse

Ansøger skal på ansøgningstidspunkt kunne dokumentere:
Videnskabelig aktivitet indenfor Ortopædisk kirurgi

Ansøgning: Ansøgning i seks eksemplarer vedlægges:
Plan for ønsket uddannelsesforløb med specifik angivelse af kompetencer som ønskes erhvervet
b. Skriftlig aftale med afdeling // forskningsinstitution som besøges. Aftalen skal indeholde oplysninger om

forløb herunder om ønskede kompetencer kan erhverves

c. Curriculum Vitae for ansøger inklusive vellignende pasfoto
d. Anbefaling fra ansøgers aktuelle ledende overlæge
e. Detaljeret budget for opholdet skal vedlægges med ansøgers og ledende overlæges underskrift

RAPPORTERING

Efter afsluttet Fellowship:

a. Indsendes rapport om det faglige forløb af opholdet mhp publicering i DOS Bulletinen og på DOS Hjemmeside
   Regnskab med relevant dokumentation vedlægges rapporten

Tidsfrister:

a. DOS Fellowship har ansøgningsfrister i august samt februar efter opslag i DOS Bulletinen og på DOS Hjemmeside
b. DOS Fellowship skal normalt være afsluttet 12 måneder efter tildeling

DOS Fondens Bestyrelse 2006

Abstracts

Pin site care in external fixation: A questionnaire study from Danish Orthopaedic Departments 2006

Jens K. Johansen, Leif Broeng
Ortopædkirurgisk afdeling, Roskilde Amts Sygehus Køge

INTRODUCTION: Pin site infection is the most common complication in external fixation. Pin site care is empiric based. A Cochrane Database review found complete absence of evidence for any particular strategy of pin site care. Dahl and Larsen found no differences between daily or weekly pin site care regarding the frequency and grade of pin site infection.
We decided to send a questionnaire to the Danish Orthopaedic Departments in order to clarify the strategies used in pin site care in Denmark.
MATERIAL AND METHODS: 31 orthopaedic departments received and returned the questionnaire (Spring 2006).
The questionnaire contained questions about types of external fixation used, how often the patients undergo pin site care and cleansing solutions used.
RESULTS: 31 departments use external fixation for distal radius fracture and large bone fractures. 26 departments use ring fixators, while 9 departments in addition use other types of external fixators.
23 departments use daily pin site care, only 1 department uses weekly pin site care. Three departments use pin site care when necessary, while 4 departments use a combination of the above mentioned. 8 departments use sodium chloride solution for pin site care, 14 departments use soap water, 2 departments use chlorhexidin solution and 7 departments use a combination of these.
CONCLUSION: One randomized clinical trial found no differences between daily or weekly pin site care. If weekly pin site care is used it reduces the expenses regarding pin site care, often performed by a nurse, and reduces the inconvenience for the patients. 75% of the Danish orthopaedic departments use daily pin site care even though there is complete absence of evidence for this strategy.

The prevalence of osteoporosis among fallers without concomitant fracture identified in an emergency department

Thomas Houe, Bente Glintborg, Bo Zerahn, Jan Pødenphant
Department of Orthopaedic Surgery; Department of Clinical Physiology and Nuclear Medicine; Department of Internal Medicine, Herlev University Hospital

INTRODUCTION: Osteoporotic fractures are a rising socioeconomic burden and osteoporosis (OP) is suspected to be under-diagnosed and under-treated in Denmark. Refined instruments to assess the individuals most likely to benefit from DXA scanning are needed. In the present study we wished to establish the prevalence of osteoporosis among individuals aged 50-80 years presenting in an emergency department after a low energy fall incidents without resulting fracture.
MATERIALS AND METHODS: From January 2004 to December 2005 patients aged 50 to 80 years sustaining a low energy fall without resulting fracture were identified from emergency department files on randomly selected dates. Totally, 201 subjects completed the study. Included patients answered a standardized questionnaire on risk factors for osteoporosis and a DXA scan was performed. Data was compared with a matched control group consisting of patients referred from general practice.
RESULTS: Totally 43 of the included subjects had OP (28 women; 15 men, 21%) compared to 23 % in the control group ($p>0.05$; NS). Among the 43 fallers with OP, 38 reported either previous fracture or a reduction of body-height >= 3 cm. These 2 risk factors were significantly more frequent among fallers with OP compared to fallers with normal/slightly reduced BMD ($P < 0.001$).
CONCLUSION: Among fallers aged 50-80 years a perceived reduction in body-height or a former fracture may be predictive of OP. In the emergency department a short questionnaire containing these informations could identify subjects likely to benefit from a DXA scan. This may be a valuable supplement to referral of patients from primary care as patients presenting in emergency departments have different risk-profile than patients referred from general practice.

Symmetrical Peripheral Gangrene induced by Pneumococcal Septiceamia

Mads Henriksen, Johnny Keller, Alex Lund Laursen, Kurt Fuursted
Ortopædkir Afd E, Århus Sygehus, Infektionsmed Afd Q og
Klinisk Mikrobiologisk Afd, Skejby Sygehus

INTRODUCTION: Symmetrical Peripheral Gangrene(SPG)is an uncommon though very severe complication of septicemia,most often caused by N.meningitides/S.pneumoniae. The septicemia may cause DIC in small blood vessels resulting in multi organ failure and limb gangrene often leading to death/extensive limb amputation.
MATERIAL AND METHODS: Five SPG-amputees at the Orthopaedics Dept, Aarhus University Hospital were included in a follow-up study. Patient case notes were carefully studied to obtain relevant information.
RESULTS: All patients had bacteraemia pneumococci fully sensitive to penicillin. Four were predisposed because of asplenia(3) and alcoholism(2). One had no predisposing factors. The focus was pneumonia in 3 and meningitis in 2 patients. All developed SPG despite early treatment with relevant antibiotics and 4 were treated in ICU setting due to renal/pulmonary/circulatory failure. All required limb amputation ranging from finger and crural to humeral and femoral levels. Nose,ears,tongue and genitals were also affected in 4 cases. Amputation was performed after demarcation or as necessitated by toxaemia. All 5 have been fitted with relevant prosthetics and 4 are again walking.
CONCLUSION: Literature on SPG is sparse and often just descriptions of the condition. No known treatment is universally effective,pathogenesis is poorly understood. The orthopaedic surgeon is often first involved with the patients,when amputation becomes necessary – limb affection often being overlooked or downplayed in the ICU setting. It is speculated the initial ischemia is due to vasospasticity and not DIC which only comes into play later. Antithrombotic treatment has not had a profound effect,while 1 case of miraculous recuperation has been reported as a result of symphathetic ganglion blockade of the limbs.

Penetrating trauma in severely injured patients admitted to Rigshospitalets Trauma Centre

Morten Engsig, Jakob Stensballe, Henrik Grønborg
Department of Orthopaedics & Department of Anaesthesia,
Centre of Head and Orthopaedics, Rigshospitalet,
Copenhagen University Hospital

INTRODUCTION: Patients with penetrating trauma (PT) caused by assault have in recent years been the focus of much attention, but what characterizes these patients and their injuries?
MATERIAL AND METHODS: We conducted a retrospective study of all patients sustaining PT due to assault registered in the Trauma Audit & Research Network (TARN) database in the period 1999-2004. The TARN database collects data on all trauma patients who are admitted for more than 72 hours, dies, or are admitted to a high dependency unit. Data are median (range) if not marked as (%).
RESULTS: In this six-year period, 178 (7,6%) out of 2,340 patients in the TARN database sustained PT. The cause of injury was assault in 165 patients (93%), and among these 65 patients (39%) had been stabbed, 39 patients (24%) had been shot, and in the remaining 61 patients (37%) the mode of injury could not be further specified. The age amongst assault victims (AV) was 31 years (1-85) and the male:female-ratio was 5.8. Thorax, abdomen, and upper extremities were injured in 67 (41%), 62 (38%) and 45 (27%) of the AV, respectively. The injury severity score (ISS) was 10 (1-48), and 116 patients (70%) had several sites of injury. Mortality was 8% (13/165). Of the primary referred patients 8/124 died (6%), while 5/41 (12%) died in the group referred from other hospitals. This difference was not significant (p=0.2, Chi2 test). The ISS was 25 for both primary and secondary referred patients not surviving.
CONCLUSION: Patients sustaining PT are more commonly younger males and injured at several sites. Despite similar ISS the mortality seemed higher in patients referred from other hospitals, however this difference did not prove to be significant.

Regeneration of porcine intervertebral disc degeneration by autologous stem cell transplantation: preliminary MRI results

Michael Bendtsen, Zou Xuenong, Li Haisheng, Lijin Zou, Tina Mygind, Hans Stødkilde Jørgensen, Cody Eric Bünger.

Ortopædisk Forsknings Laboratorium, MR-forskningscenter,
Århus Univeritets Hospital.

INTRODUCTION: Intervertebral disc degeneration (IDD) is a multifactorial chronic disease with changes in disc structure, function, cell and matrix composition. IDD is the most common cause of low back pain. Bone marrow derived stem cells have been shown to be able to differentiate intp nucleus pulposus like cells in vitro and might have potential to regenerate the degenerate disc.

MATERIAL AND METHODS: 10 skeletally mature Göttingen minipigs were included. IDD were induced by scalpel incision in 4 levels in each pig. Stem cells were purified form bone marrow aspirate, labeled with fluorescent PKH-26 and injected 12 weeks post-operatively. Total observation was 30 weeks. MRI was performed pre-operatively and every 6 weeks.

Confocal microscopy (PKH-26 labeled stem cells), μCT of vertebral endplates, histology and real time PCR will be performed.

RESULTS: 2 pigs died prematurely (1 in anesthesia. 1 of hemothorax). Modic type II changes were seen in 4 pigs.

There were no signs of disc herniation or nerve root compression in any of the pigs. Degenerative discs were significantly smaller than normal controls ($p<0.05$) and had decreased disc height. Also degenerative discs had significantly lower apparent diffusion coefficient (ADC) value. Discs treated with autologous stem cell injection did not show any further progression but maintained the same size. No statistical difference in fractional anisotropy was found between normal controls, stem cell treatment, and degenerative controls.

CONCLUSION: Treatment with autologous stem cells was able to stop the degenerative process, but not completely normalize the disc with regard to height, size, and signal intensity as seen on MRI.

Future analysis will focus on stem cell survival and endplate function.

Stimulation of bone healing with a reinforced bone substitute and collagen (Colloss®) – An ex-vivo and in-vivo study on sheep

Jesper Røjskjær, Ming Ding, Søren Overgaard
Department Orthopaedic Surgery, Odense University Hospital

INTRODUCTION: The purpose of this study was to evaluate the mechanical properties and biological effects of a new PLA reinforced substitute

MATERIALS AND METHODS: The substitute HA/, -TCP (70/30) was reinforced with PLA-50 (Poly-Lactic-Acid). The ex-vivo part of the study was a mechanical test of the substitute in 3D. The in-vivo part included 7 sheep. All sheep had four implants. One in each femoral condyle.

1: Allograft, 2: Colloss E 3 vials of 20 mg, 3: Colloss E, 3 vials of 20 mg + substitute, 4: Substitute

The implants were inserted into a critical-size defect in trabecular bone of the distal femur. Nine weeks after surgery the sheep were killed. The mechanical properties of the defects were tested by push-out testing. The formation of new-formed bone in the defect was evaluated by histomorphometry and qualitative histological analysis.

RESULTS: Ex vivo study: The PLA-reinforced substitute revealed significantly better mechanical properties than the substitute without PLA ($p<0.001$). The first series of the reinforced substitute had similar mechanical properties compared to human trabecular bone.

In vivo study: The allograft groups showed significantly better results mechanically compared with the other groups ($p<0.001$). There was no difference among the other three groups.

Histomorphometric analysis showed no significant difference in new-formation bone between groups.

CONCLUSION: The PLA-reinforced substitute showed much better mechanical properties than the substitute without PLA. In vivo, there was no difference in the new-formation of bone between the four groups. For the first time we have been able to create a bone substitute with mechanical properties comparable to those of human trabecular bone.

Equine bone protein extract as bone graft substitute in experimental posterolateral spine fusion

Haisheng Li; Xuenong Zou; Arne Briest; Marco Springer; Cody Bünger
Orthopedic Afd E

INTRODUCTION: The application of equine bone protein extract in spine fusion has not been documented. In this experiment, we evaluated the equine bone protein extract (COLLOSS® E, OSSACUR AG, Oberstenfeld, Germany) in a porcine posterolateral spinal fusion model. The aim was to find a carrying material for the cotton like equine protein extract.

MATERIALS AND METHODS: 12 female farm pigs, each of 50kg, were chosen as experimental animals. Posterolateral lumbar spine fusion of L3/4, L4/5 transverse processes were performed bilaterally with following groups.

1. COLLOSS E+ ceramic block (10x20x50mm, Camceram®, Leiden, the Netherlands), Camceram alone as control.
2. Autograft mixed with COLLOSS E, autograft alone as control.
3. COLLOSS E contained in titanium stents of 5cm long, with stent alone as control.
4. COLLOSS E contained in titanium mesh tube of 5cm long, with titanium mesh alone as control.

The fusion was supplemented with pedicle screw fixation. Each group had 4 pigs and treatments were randomized to the left and right side. Pigs were observed for 3 months. After sacrifice, the spine segments were examined with x-ray, CT and micro-CT.

RESULTS: All pigs went through the observation without major complications. Due to the radio-opaque feature of ceramics, fusion status was not given on x-ray or ct scanning. The fusion results of other groups showed that all autograft levels achieved .fusion, while stent or titanium mesh functioned nearly the same with 1/3 fusion rate. With micro-ct scanning, biphasic ceramic Camceram showed good incorporation and bridging in 2/3 cases.

CONCLUSION: The present study shows that equine bone protein extract in combination with ceramic block could be a potential bone substitute in posterolateral spinal fusion.

Alendronate Treatment does not Maintain a Residual Effect on Spinal Fusion after Treatment

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INTRODUCTION: Bisphosphonate has been shown to inhibit bone resorption at a bone-implant interface and increase bone ingrowth into porous biomaterials. Clinical investigations have shown a relatively stable therapeutic effect between 0.5-7 yr after bisphosphonate treatment withdrawal in postmenopausal women. With the increase of the patients who are being treated for osteoporosis frequently comes to spine fusion, however, it is still controversial whether bisphosphonate has a detrimental effect on spinal fusion.
MATERIALS AND METHODS: In this study, twenty-four pigs were randomly divided into two groups of each 12 pigs. The pigs underwent anterior intervertebral lumbar arthrodeses at L2-3, L4-5 and L6-7. Each level was randomly allocated to one of the 3 implants: a porous tantalum ring with pedicle screw fixation, a porous tantalum ring or a carbon fiber cage with anterior staple fixation. The central hole of implants was packed with an autograft. Alendronate was given orally for the first 3 months to one of the groups. The pigs were observed for 6 months postoperatively. The histology and Micro-CT scans were done after killed.
RESULTS: In both groups, no difference was found in spinal fusion rate of three implants. Bone ingrowth into the central holes of implants, the implant pores, and bone-implant interface did not show any difference in three implants between both groups histologically. Trabecular bone microarchitecture in the central hole of the carbon fiber cage did not differ between two groups.
CONCLUSION: Short-term alendronate treatment does not maintain a residual effect on spinal fusion with interbody devices and autograft after treatment withdrawal.

Survival and ethics in decompressive surgical treatment of spinal extradural metastasis

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INTRODUCTION: The role of surgery in management of spinal extradural metastasis is to achieve or secure useful motor function. The purpose of the present study was to analyze the survival and to discuss the ethical benefit after decompressive surgical treatment of spinal extradural metastasis.
MATERIAL AND METHODS: From January 2001 to December 2005 185 patients were included in the study. All patients were retrospectively scored after the Tokuhashi score, the Tomita score and Frankel classification.
RESULTS: The overall survival was 7 (0-90) months. Survival of 3 patients with Tokuhashi score 0-4 was 1 (?-11) months, survival of 124 patients with Tokuhashi score 5-8 was 5 (0-47) months and survival of 61 patients with Tokuhashi score 9-12 was 11 (0-90) months. Of the patients with Tokuhashi score 9-12 35 patients with Tomita score 7 survived 8 (0-40) months, 22 patients with Tomita score 4-6 survived 15 (?-90) months and 4 patients with Tomita score 1-3 survived 25 (20-30) months. According to the Frankel classification 57 patients improved and in 9 patients the neurological disease progressed. Useful motor function was achieved in 31/68 patients with no useful motor function before surgery. Useful motor function was achieved or secured in 141 patients. Overall 60 patients did not survive more than 3 months, 34 did not survive 2 months and 19 did not survive 1 month. Thirty-five of those patients did obtain or secure useful motor function.
CONCLUSION: Since the survival of one third of patients is less than 3 months surgery in this group may not be acceptable. More than 50 % of those patients did obtain or secured useful motor function. Overall 75 % obtained or secured useful motor. From a surgical point of view decompressive surgical treatment of spinal extradural metastasis is satisfactory.

The HINTEGRA Total Ankle Prosthesis – short-term results

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INTRODUCTION: We report the early results of a new uncemented total ankle prosthesis used for the first time in Denmark.
MATERIAL AND METHODS: A consecutive series of 46 patients (47 ankles)operated in the period november 2003 until august 2006. Preoperative diagnosis was post-traumatic osteoarthrosis, systemic arthritis, infection and one status post-arthrodesis.
RESULTS: 3 prosthesis was revised. Two due to lack of patient compliance to the postoperative regime, and one caused by infection. One patient sustained a fracture of the talus and was operated with screw fixation. All revisions vere succesful. The AOFAS Hindfoot Score improved at follow-up.
CONCLUSION: The early results look promissing with a high rate of patient satisfaction. Total ankle arthroplasty should be considered as an alternative to ankle arthrodesis.

The social law and referrals to orthopaedic shoemaker, can we do it better?

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INTRODUCTION: The purpose of this study was to describe the problems concerning knowledge and information about the social law by doctors who are referring patients to orthopaedic shoemaker. Referrals from orthopaedic specialists and others were screened for ordinations.
MATERIALS AND METHODS: 87 patients, referred to our outpatient orthopaedic shoemaker with foot problems, were included in the study. Mean age was 55,7 years(13-89).Questionnaires were used to collect data.
RESULTS: 67 patients (77%) expected public assistance.14 patients(16%)were correctly informed about the social law,73 patients (84%) were not informed.14 patients (16%) were referred from non-orthopaedic doctors in our hospital, 43 patients (50%) from orthopaedic doctors and 30 patients (34%) from their own general practitioner.44 patients had the right to obtain public assistance, 43 patients did not. 24 of the 44 patients who were not informed about the social law were unsatisfied being not able to obtain public assistance,t he 20 patients who were informed were satisfied. Only 15 of the 43 patients who were referred from orthopaedic specialists had ordinations concerning the insoles and shoes in their referrals.
CONCLUSION: Information and knowledge about the social law concerning public assistance regarding insoles and orthopaedic shoes is important to obtain satisfied patients.It is a must that the doctor´s referral contains detailed ordinations as a tool for the orthopaedic shoemaker.

Intra-tester reliability of a simple 3D method for measuring foot medial longitudinal arch stability during dynamic loading

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INTRODUCTION: The (lack of) stability of the foot medial longitudinal arch (MLA) has been proposed to be of influence in many lower leg and foot pathologies. In order to understand how MLA stability and mechanics change during activity, clinicians have used static foot measurements to predict dynamic foot posture. However, reliable clinical methods for measuring dynamic MLA stability are needed, as prediction of dynamic loading from static measurements may not be accurate.
The aim was to investigate the reliability of a new simplified dynamic, biomechanical 3-dimensional method to investigate MLA stability during gait.
MATERIALS AND METHODS: 26 healthy male subjects aged 20-51 yrs were included in the study. The study was designed as an intra-tester reliability study. Three markers were placed on the medial side of both feet: a) caput of metatarsal head I, b) the navicular tuberosity, and c) the medial side of the calcaneus. The angle in the vertical plane between these three markers represented the MLA during walking, and angles were calculated from 3D coordinates of the markers measured by an 8 camera 3D system including two force plates. The angle of the MLA was obtained at 1) initial heel strike with no load on the MLA and 2) at time of peak ground reaction push-off force, when the heel was lifted from the ground and the MLA was loaded. The stability of the MLA was calculated as the difference between angle 2 and angle 1. ICCs (2.1) were calculated.
RESULTS: The dynamic 3D MLA stability showed excellent ICCs of 0.89 and 0.95 (right and left, respectively).
CONCLUSIONS: The 3D dynamic method proved very reliable in healthy subjects, and may enhance the evaluation procedures of orthopaedic foot surgery and rehabilitation regimes.

Reliability and normal values of a novel technique to measure naviculare medialisation

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INTRODUCTION: Foot morphology is often mentioned as an important factor in development of all major running injuries, and foot assessment is integrated in the orthopaedic examination of sports injuries. A variety of foot tests have been described, but the reliability and validity of most of these tests are questionable, and at present no golden standard exists. We have developed a novel test for measurement of the medialisation of the tuberositas of the navicular bone relative to a static reference line connecting the forefoot and hind foot. We hereby report the reproducibility and normal values from this novel test.
MATERIAL AND METHODS: The participants in this study consisted 130 recruits (Average: age 21, weight 86 kg, height 188 cm, foot size 44 (European size)). 2 examiners tested on one day as follows: both feet once and subsequently the right foot again.
RESULTS: The mean (+/- SD) medialisation of the navicular bone was 3.7 (+/-3.4) mm, and the normal interval (mean +/-1.5 SD) –1 to 9 mm. The intra tester reproducibility as judged by intra class coefficient ICC type (3,1) was 0,95 and 0,90 for the 2 examiners respectively, while the intertester ICC was 0,83 for the left foot and 0,79 for the right foot. Intratester Limits of agreement was +/- 2,1 mm and intertester Limits of agreement +/- 4,4 mm.
CONCLUSION: The technique features an "almost perfect" to "substantial" reproducibility as judged by ICC, even if Limits of agreement suggest that when comparing results between testers precaution should be taken. If the described technique is combined with a reproducible measure of navicular bone height, e.g. the Feiss Line test, a comprehensive description of foot posture is achieved, as the position of the navicular bone in the three planes is described.

A novel murine model of flexor tendon grafting and adhesion formation

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INTRODUCTION: Tendon repair is complicated by fibrotic adhesions that compromise the tendon gliding function. In this study we seek to elucidate the fundamental differences in adhesions in auto- vs. allograft repair of the murine FDL tendon.
MATERIAL AND METHODS: The distal FDL tendon was transected and a freeze-dried tendon allograft or live autograft was used to repair the gap. Mice were sacrificed at multiple end points up to 84 days post surgery. The limb was fixed and the FDL tendon was incrementally loaded. The MTP flexion angle was quantified at every load. The flexion angle is plotted vs. the excursion load. The rate constant of the rise of the curve (a) is representative of the resistance to flexion and is therefore termed the adhesion coefficient. The tendon was following tested for biomechanical properties including maximum tensile force and stiffness.
RESULTS: The adhesion coefficient at 14 days was greater than normal for both grafts ($p<0.001$). No significant difference between the grafts was seen at 14 days. At 28 days, the adhesion coefficient of the autografts (n=9) was 83-folds greater than normal tendon (n=8) ($p<0.001$). In contrast, the adhesion coefficient for allograft (n=10) was increased only 16-fold compared to normal tendon ($p>0.05$). Surprisingly, there were no significant differences in maximum tensile force or stiffness between auto- and allograft repairs. The tensile strength of both grafts never exceeded 50% of the strength of normal FDL tendon.
CONCLUSION: This model offers a tool to examine the biomechanical features as well as cellular and molecular events associated with tendon repair and adhesion formation. Futher, it suggsts that allografts may offer a clinically favourable alternative due to the reduced adhesion coefficient.

Effects of mesenchymal stem cells on implant fixation in sheep

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INTRODUCTION: Improving early implant anchorage in revision and primary total hip arthroplasties is important for long term survival of the prostheses. This study investigates whether mesenchymal stem cells (MSCs) in combination with a bone substitute (hydroxyapatite/, -tricalcium phosphate (HA/, -TCP) granules) can enhance early bone ingrowth and thereby improve bony fixation of implants.

MATERIAL AND METHODS: MSCs were harvested from sheep bone marrow 3 weeks prior to surgery and expanded in culture. Unloaded cylindrical titanium alloy implants with a circumferential gap of 2 mm were inserted in the proximal humerus, bilaterally, of eight sheep. HA/, -TCP granules and 10 x 10^6 autologous MSCs were mixed peroperatively and filled into the gap on one side whereas the other implant was treated with HA/, -TCP alone (Control). After a 5-week observation period implant fixation was evaluated mechanically by push-out testing and bone ingrowth and gap healing by histomorphometry.

RESULTS: Mechanical data showed that implants treated with MSCs had less stiffness and strength of the interface compared with control implants whereas energy absorption was 2 fold increased for control implants, however not statistically significant.

Histomorphometric evaluation showed a tendency towards more bone ingrowth in the MSC-group, however no difference in bone volume was shown. Implants treated with MSCs had islands of fibrocartilage in the gap which was not shown in the controls.

CONCLUSION: The present study did not shown any effect of MSCs on mechanical fixation, however there was a tendency towards more bone ingrowth in the MSC group. Cell dose in combination with stimulating factors are to be further investigated.

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Identification and quantization of circulating potential multipotent progenitor cells during bone regeneration by multiparametric flow cytometry analysis

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INTRODUCTION: Bone fracture is followed by tissue regeneration initiated by local and circulating primitive progenitor cells.
Hypothesis That bone fracture initiates the mobilization of primitive bone progenitor cells to the circulation and that a cell cluster consistent of these low frequent progenitor cells can be identified and quantified during bone healing.
AIMS: Identify and quantify circulating bone- and endothelial progenitor cells from the mesenchymal- or mesodermal stem cell cluster after a significant bone fracture.
MATERIAL AND METHODS: A total of 8 consecutive blood samples were obtained from 32 patients with ankle- or hip fractures 12 weeks after the fracture. Mononuclear cells, sera- and plasma proteins were isolated from the samples. MPCs are identified by multi parametric flow cytometry and gene expression profile by quantitative RT-PCR. Plasma growth factors are measured by ELISA. These parameters will be related to healing of the fracture.
RESULTS: The number of circulating mononuclear cells (MNC) increase significantly seven days after bone fracture. This elevation in circulating MNCs persist in the entire observation period. The interesting subpopulation MPCs will be determined within the next months.
CONCLUSION: Circulating mononuclear cells are significant increased several months after a larger bone fracture, indicating that these cells participate in the healing processes of the fracture.

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Glucocorticoid induced osteopenia in sheep cancellous bone

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INTRODUCTION: Orthopaedic research lacks suitable large models particularly for implant/biomaterial research in osteopenic bone. This intensive study aimed to induce osteopenic bone and to validate the present large animal osteopenic model.

MATERIAL AND METHODS: Eighteen female sheep were randomly allocated into 3 groups: group 1 received steroid treatment (GLC; 0.60 mg/kg/day methylprednisolone) for 7 months, group 2 received the same treatment for 7 months, and further observed for 3 months without GLC; and group 3 served as controls, and left untreated for 7 months. The sheep were housed outdoors in paddocks, and received grass pellets (0.55% calcium and 0.35% phosphorus) and hay. After sacrifice, cancellous bone specimens from lumbar vertebra, femur and tibia were micro-CT scanned to quantify their 3-D microarchitecture, and tested to determine their mechanical properties. Serum and urine biomarkers for bone formation and resorption were also determined.

RESULTS: Typical osteopenic changes were observed after 7 months of GLC treatment. Cancellous bone density was reduced by 36%, trabecular thickness by 30%, and changed from typical plate structure to a combination of plate and rod structure with increased connectivity by 70%. Cancellous bone strength was reduced by 52%. Bone formation marker serum osteocalcin was reduced by 70%, but recovered with an increase of 45% at 10 month (all $p<0.001$). At 10 months, the architectural and mechanical properties were significantly recovered to the level of the control sheep.

CONCLUSION: Reduction in bone quality and formation rate indicates a useful sheep model for short-term study. However, recovery after 3 month suggests that GLC should be maintained to keep osteopenic bone.

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An accelerated perioperative intervention for hip and knee replacement is effective!

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INTRODUCTION: In Denmark approximately 12,000 hip and knee replacements were performed in 2005. Accelerated perioperative interventions are currently implemented, though only a low level of evidence of the effect exists. We performed an efficacy study of an accelerated perioperative intervention in patients receiving primary total hip, total knee and unicompartmental knee replacement.
MATERIAL AND METHODS: A randomized clinical trial was undertaken where 87 patients were randomized to either a control group receiving the current perioperative procedure, or an intervention group receiving a new accelerated perioperative care and rehabilitation procedure. Primary outcome measures were in hospital length of stay (LOS), and gain in quality adjusted life year (QALY) at 3 months follow-up.
RESULTS: The groups were comparable at baseline. LOS was significantly shorter ($p<0.001$) in the intervention group (4.9 days) as compared to the control group (7.9 days). Gain in QALY was significantly higher for the hip patients ($p<0.05$) in the intervention group (0.44 QALY) as compared to the control group (0.27 QALY), when adjusted for the baseline status. No difference was observed in QALY gain for the knee patients.
CONCLUSION: An accelerated intervention in patients undergoing primary hip and knee replacement is effective for both the patients and the hospital.

Postoperative analgesia in total hip arthroplasty: a randomized, double-blinded, placebo-controlled study on per- and postoperative ropivacaine, ketorolac and adrenaline wound infiltration

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INTRODUCTION: Painlessness and comfort are important factors for optimal mobilisation after total hip replacement. Use of opioids can be associated with problematic side effects. Postoperative pain is described to be worst the first days after surgery. This study investigates the efficacy of double wound infiltration.
MATERIAL AND METHODS: Thirty seven consecutive patients undergoing total hip replacement were randomized into two groups in this double blinded study. They received wound infiltration by the end of surgery and through an intraarthicular catheter 24 h post operation. The catheter was placed at the end of surgery. One group received solutions of ropivacaine, ketorolac and adrenaline. The control group was injected with saline solutions. The post operative analgesic regime was standardized. VAS and WOMAC Index were used to assess pain, stiffness and physical function. Side effects, mobility and patient satisfaction were recorded. The observation period was 6 weeks.
RESULTS: The patients who received the analgesic solution had significant less pain till two weeks postoperative and they had less joint stiffness and better function till 1 week postoperative.
In addition, they had a significant lover use of analgesia till day 4 postoperative.
More patients in the ropivacaine group described their analgesia as excellent and they were faster mobilized according to criteria of discharging.
CONCLUSION: Operative and postoperative wound infiltration with multimodal drugs can significantly reduce pain and analgesic requirement after total hip replacement. Joint stiffness and physical function were significant improved, leading to a faster postoperative mobilization.

Repair of the Medial Patellofemoral Ligament in Primary Dislocation of the Patella. A Prospective Randomised Study

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INTRODUCTION: Lateral dislocation of the patella will, conservatively treated, lead to disability due to anterior knee pain and instability/redislocations in between 30 and 50% of the patients. Patella dislocation results in lesion of the medial patellofemoral ligament (MPFL). Early reinsertion of the MPFL could lead to improved clinical outcome after primary patella dislocation.
The purpose of this randomized prospective study is to evaluate clinical results after operative treatment with refixation of the MPFL compared to non-operative treatment in patients with acute primary dislocation.
MATERIAL AND METHODS: The present study design was a randomised prospective study.
Patients between 13 and 30 years with primary patella dislocations and no prior history of patelladisorders were included. 84 were included in the study. 7 patients were lost to follow-up. All patients were examined by x-ray and initially arthroscopic examined before randomization to operative or non-operative treatment. The operative treatment consisted of refixation of the medial patellofemoral ligament to the medial epicondyle with suture anchors followed by kneebrace (0 –20 degrees) for 2 weeks. The conservative group were treated without brace.
Main endpoints were KOOS, Kujula knee function score and redislocation rate at minimum 2 years follow-up.
RESULTS: Redislocation rate was 16,7 % in the operated group versus and 20 % in the non-operated group (NS). KOOS- and Kujula scores (0-100) showed no significant difference between the groups. Redislocations were not correlated to sex, body mass index or Q-angel.
CONCLUSION: Data indicate that early reinsertion of the medial patello-femoral ligament does not reduce the risk for redislocation or improve knee function in patients with primary dislocation of the patella.

rhBMP2 and pamidronate in experimental allografted gap implants - catastrophic results

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Århus Sygehus E

INTRODUCTION: BMP's are known to increase bone formation around allografted implants, but have also been associated with increased graft resorption and implant instability. Bone resorption can be inhibited by bisphosphonates.
We hypothesized that topical bisphosphonate (Pamidronate, Mayne Pharma) in combination with rhBMP2 (InductOs, Wyeth) would give increased mechanical implant fixation and increased new bone formation without excessive allograft resorption.
METHODS: Four 2.5 mm gap implants were inserted into the proximal humeri of each of 16 dogs. The gap around each implant was filled with fresh frozen impacted allograft with or without intervention treatment. Half the dogs received Ti-implants, the other half HA-implants. The 4 treatment groups were:

1. allograft alone
2. allograft + rhBMP2
3. allograft + pamidronate
4. allograft + rhBMP2 + pamidronate

Four weeks observation time.
RESULTS: Superior mechanical fixation was seen for the control groups. The rhBMP2 group had more new bone and less fibrous tissue than the mechanically superior control group. However, there was almost no allograft left in the rhBMP2 group due to extreme resorption. The addition of pamidronate seemingly blocked bone metabolism completely. No new bone was formed, allograft was preserved, and a dense fibrous capsule covered the implant surface.
CONCLUSION: Topical pamidronate and rhBMP2 in combination and alone greatly weakened the mechanical fixation of the implants. The experiment confirms previous reports of mechanical instability of implants when BMPs are added to periimplanteric defects. Pamidronate alone had catastrophic effects on bone metabolism and implant fixation in this experiment. The results encourage extreme caution in adjuvant therapies of arthroplastic surgery.

Cartilage regeneration with chondrocytes in fibrinogen gel scaffold and polylactate porous scaffold. An in vivo study in goats

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INTRODUCTION: Recently porous scaffolds have been introduced for clinical cartilage tissue engineering. Numerous scaffold materials exist and the optimal scaffold needs to be identified. The present study aims to investigate the cartilage regenerative response of a polylactate (PLGA) porous scaffold and a fibrin scaffold combined with chondrocyte suspension in a goat femoral condyle full thickness cartilage defect model.
METHODS: 20 adult goats were used for the study. 6 mm circular defect was created in both medial femoral condyles. Cartilage tissue was harvested for chondrocyte culture. At secondary open surgery the defects were randomized to the following four treatment groups 1. Empty defect (control) 2. Microfracture (control) 3. Fibrin scaffold with chondrocytes and 4. Fibrin/chondrocyte solution in a PLGA porous scaffold. Animals were followed for 4 month. Analyses: ICRS macroscopic scoring (0-12). Mechanical test was performed to assess stiffness of regeneration tissue. Histological analyses was performed by O,Driscoll and Pinada cartilage scores and percentage filling of the defects..
RESULTS: The ICRS and histology scores demonstrated highly significant difference between groups. The cartilage regeneration is PLGA/Cell group demonstrated high defect fill and a tissue characteristic close to hyaline cartilage whereas no regeneration tissue was seen in the empty defects. The fibrin/chondrocyte and microfracture group demonstrated limited repair tissue formation. Mechanical testing demonstrated no difference between treatment groups.
CONCLUSION: The PLGA/cell construct demonstrates an extensive cartilage regenerative response with good phenotypic characteristic. As expected no regeneration was seen in the empty defects. Fibrin scaffold with chondrocytes and microfracture stimulated only limited cartilage repair tissue. A porous PLGA scaffold in combination with cultures chondrocytes seem to be a good technique for cartilage tissue engineering in vivo.

Great plantar pressure variability during gait may be a risk factor for foot ulceration in patients with diabetes mellitus and peripheral neuropathy

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INTRODUCTION: It is well known that an association between high plantar pressures and foot ulceration exists. In combination with peak plantar pressure and pressure-time integral, the lack of variability in peak pressure during gait has been suggested to be a key player in the development of plantar ulceration. Therefore, the purpose of the present study was to measure the variability of plantar loading during gait in diabetic patients with and without peripheral neuropathy.
MATERIAL AND METHODS: 29 diabetic patients aged 46-80, 15 with and 14 without peripheral neuropathy, were tested for variability in peak plantar pressure and pressure-time integral during bare foot gait. Plantar pressure distribution was measured on a forceplate, and the average and standard deviation of peak pressure and pressure-time integral data from 10 trials were calculated.
RESULTS: Peak pressure at metatarsal head (MTH) 1 and 5 were significantly greater in the neuropathic group (MTH 1: 483 ± 200 kPa and MTH 5: 386 ± 234 kPa) compared to the non-neuropathic group (MTH 1: 364 ± 188 kPa and MTH 5: 236 ± 106 kPa), $p<0.05$. Interestingly, the step-to-step variability in peak pressure and pressure-time integral was significantly greater in the neuropathic group at MTH 1 and MTH 5.
CONCLUSION: The present findings indicate that the variability in plantar pressure during gait is significantly greater in diabetic patients with neuropathy than in diabetic patients without neuropathy. Interestingly, the significantly greater variability were observed at MTH 1 and MTH 5, which represent the regions that are the most frequent areas for ulceration. Therefore, the variability in peak plantar pressure during gait may be useful as a risk indicator in future models that seek to screen patients with high risk of plantar ulceration.

Acute Patellofemoral pain caused by overuse – Aggravating activities, pain diagrams and clinical examination. MRI and US findings

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INTRODUCTION: Findings in subjects with long lasting patellofemoral pain syndrome (PFPS) is well described in the literature, but no research have been done to investigate findings in subjects with acute PFPS. The purpose of this study was to describe findings in subjects with acute PFPS, as this might provide further insight in the genesis of patellofemoral pain.
MATERIAL AND METHODS: From December 2004 to February 2006 30 recruits in the Royal Danish Life Guards consecutively diagnosed with PFPS were included. Subjects were examined using Knee Pain Diagrams (KPD), PFPS Pain Severity Score (PSS) and clinical examination. 5 consecutive patients further underwent US and MRI of the knee.
RESULTS: On the PSS the most painful activities were sprinting, kneeling, stair climbing, jogging, squatting down and participating in sports. Sitting with knees bend was significantly less painful than the 6 most painful activities. On the KPD pain was marked as follows: peripatellar area (83%), distal patellar pole (40%), central patella (30%). On clinical examination pain was experienced as follows: peripatellar area (83%), fat pad of Hoffa (40%), medial plica (26%), patellofemoral compression (26%), patella tendon (20%) and joint line (13%). Discrete synovial reaction and effusion was detected on 2 cases on US.
CONCLUSION: On clinical examination all structures covered by synovium were found to be painful in a proportion of the knees. These findings could indirectly indicate that in acutely injured subjects synovial irritation could be a major mechanism of pain, where as subchondral bone less frequently might be involved. To further prove this, studies linking clinical findings to pathology are warranted.

Arthroscopy of Knee with Total Knee Replacement

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INTRODUCTION: Total knee arthroplasty TKA is a successful procedure; however some patients will postoperatively suffer from pain and stiffness, which may cause non-functional knee prostheses. The treatment will normally be physiotherapy, but is not always beneficial. Arthroscopy after knee prostheses is a possibility in managing complains after TKA, and seems to be safe in regards to risks for post-arthroscopic infection.
MATERIAL AND METHODS: 50 patients with TKA had performed 65 arthroscopies since 1997. There were 27 males and 23 females. In 9 cases arthroscopy was performed more than once. In 2 cases the procedure was bilaterally. The main indication was impaired function after TKA, which was caused by either pain and/or impaired range of motion (R.O.M). In 4 cases the arthroscopy was performed as a treatment of an infected TKA.
RESULTS: There was seen no deep infection after the 65 arthroscopies, and no revision due to arthroscopies. The range of motion was increased from average 6 in extension lap to 2 , and average from 89 in flexion to 117 after the arthroscopies.
In 4 cases the prostheses was found to be loose or damaged.
CONCLUSION: Arthroscopy of knee with TKA with impaired function is a possibility, the risks of post operative infection seems low. The average of R.O.M can often be improved.

NSAID-plaster is a good supplement in treatment of the sprained ankle

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INTRODUCTION: Ankle sprains are the most common sports injury treated in the emergency department. The standard treatment is RICE (rest, ice, compression and elevation). Only few studies concerns about the effectiveness of RICE. Non steroid anti-inflammatory drug (NSAID) is an anti-inflammatory and pain-reducing drug and can be used systemic and as a local administration with ex. plaster. In randomised double-blind placebo-controlled studies NSAID-plaster shows a significant effect on both pain and swelling compared to placebo. The key measurements are pain (VAS-score), swelling and patient satisfaction.The purpose of the present study was by help of a questionnaire to investigate the patient satisfaction with NSAID-plaster as a supplement to RICE.

MATERIAL AND METHODS: We included 62 patients diagnosed "sprained ankle" during six months from January 2006. The patients were blindly randomized to either RICE or RICE and NSAID-plaster (Flector©) as a supplement for 5 days as recommended from the drug-company. All patients got a questionnaire about pain intensity at different times after onset of treatment, the use of RICE, and time of resuming work.

RESULTS: The patients were normal-distributed, 32 in the plaster group aged 39.6 [19-76] years, and 30 in the control group aged 35.5 [18-60] years. Using independent samples unpaired t-test there were non significant difference between the groups. The decrease in VAS-score 4 hours after starting treatment was 0.6 (plaster group) and 0.4 (control group) (NS). Day 5 VAS-score was 4.1 and 3.7. (NS). Mean time of resuming work was 3.5 and 4.2 days (NS)

CONCLUSION: NSAID-plaster as a supplement to RICE seems to have a pain reducing effect; however the result is not statistically significant.

Peri- and intraarticular Analgesic Technique versus Femoral Nerve Block after Total Knee Arthroplasty, a Randomized Clinical Trial

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INTRODUCTION: Postoperative pain after total knee arthroplasty (TKA) can be difficult to manage and may delay recovery. Recent studies suggest that periarticular infiltration with local anesthetics may improve outcome.
MATERIALS AND METHODS: Eighty patients undergoing TKA under spinal anesthesia were randomized to receive continuous femoral nerve block (group FEM) or peri- and intraarticular infiltration and injection (group ART). Group ART received a solution of 300 mg ropivacaine, 30 mg ketorolac, and 0.5 mg epinephrine by infiltration in the knee at the conclusion of surgery, and two postoperative injections of these substances through an intraarticular catheter.
RESULTS: Ability to walk >3 meters on the first postoperative day was significantly improved in group ART (FEM: n=7, ART: n=29, $p<0.001$). Group ART also had lower pain scores during activity (FEM: 5, ART: 3, median, numeric rating scale 0-10, $p=0.001$) and lower consumption of opioid on the first postoperative day (FEM: 100 mg, ART: 83 mg, median, $p=0.018$). No differences between groups were observed regarding side effects or length of stay.
CONCLUSION: Peri- and intraarticular application of analgesics by infiltration and bolus injections can improve early analgesia and mobilization for patients undergoing TKA. Further studies of optimal drugs, dosage and duration of this treatment are warranted.

Micromotions in Porous coated vs Porous HA-coated TKA -A randomized study of fourteen knees with one year follow-up

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INTRODUCTION: Bioactive HA (hydroxyapatite) coatings of TKA are believed to increase bone ingrowth and enhance the fixation of the implant for better long term outcome. The aim of this study was to detect and measure possible differences in micromotions of the tibial implant.
MATERIAL AND METHODS: 14 patients with osteoarthrosis of the knee were consecutively randomized into two groups (group 1/HA-coated: n=7 - M/F ratio: 4/3 - mean age: 66.9 years, group 2/non-HA coated: n=7 - M/F ratio: 2/5 - mean age: 74.7 years) and operated on with either a porous coated or HA-porous coated uncemented Duracon (Stryker Denmark) TKA. Two-dimensional roentgen of the knee was performed postoperatively and at follow-up after 3, 6 and 12 months. A validated RSA software (WinRSA ver. 4.0, Tilly Medical Products, Sweden) was used for analysis. Statistics: Nonparametric Mann-Whitney U test and Levene`s test for homogeneity.
RESULTS: At 12 months follow-up we observed no significant differences in mean translations and rotations between the two groups. At 12 months group 1 had subsided mean -0.222 mm (95% CL: -0.569-0.124) and group 2 had subsided -0.493 mm (95% CL: -1.483-0.497). Both groups rotated mainly around X-axis (posterior tilt) and Z-axis. In group 2 we observed a higher variance in translations along Z-axis (p=0.037) and rotations around Z-axis (p=0.038). In general the uncoated group showed a tendency towards higher variance along and around the three cardinal axes. From 6 to 12 months only very small migrations were seen in group 1.
CONCLUSION: Subsidence and posterior tilt are the main migration pattern in both HA-coated and non-HA-coated TKA. The HA-coated TKA stabilizes after 6 months whereas the non-HA-coated TKA show tendency towards continuing migration.

Written consent to knee arthroplasty

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INTRODUCTION: Studies have shown that record-keeping of informed consent is a highly neglected area among Danish doctors. This constitutes a legal problem when patients complain about lack of information, and it often leads to a rebuke of the doctor. Written consent prior to surgery may be a remedy to the problem. This study aimed to investigate patients' views on written consent before total knee replacement.
MATERIAL AND METHODS: 26 individual interviews were made using a semi-structured interview guide. All patients were potential candidates for operation at the time of the interview, and all patients had recieved a written consent form at the first clinic appointment. Specific themes and topics were identified from the interviews and factors influencing patients' overall views were determined.
RESULTS: Most of the interviewed were positive towards signing the written consent form prior to surgery, and some considered the written consent to be an improvement over oral consenting. General confidence in the surgeon and health-system, and confidence in the information given were mentioned as important factors. A few found the wording of the declaration too direct, which influenced them in a negative direction. A minority suspected that written consent was the surgeons' attempt to avoid negligence complaints.
CONCLUSION: The positive outcome of this investigation opens up for a broader usage of written consent. By introducing a written consent form it should be possible to decrease the number of complaints from patients, and furthermore put communication between surgeon and patient in focus. Based generally on the outcome of this study and spcifically on some negative comments, a consent form preamble is suggested. We believe that written consent is an improvement over oral consenting for both patient and surgeon.

Early postoperative complications after primary knee arthroplasty

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INTRODUCTION: The aim of this study was to analyse the early postoperative complications after primary knee arthroplasty for osteoarthritis and to compare complication rates between total (TKA) and unicompartmental (UKA) replacement.
MATERIAL AND METHODS: Since 1997 data for all patiens with knee arthroplasty performed in our department have been stored in a database, including information about indication for the operation and type of implant, as well as any postoperative complications realized within the first 6 months after the operation. Before 2000 we performed only total arthroplasties (AGC) and after that time also unicompartmental replacement (Oxford). Selected for the study were patients with osteoarthritis operated with primary arthroplasty in the period 2000-2004.
RESULTS: 1352 knee arthroplasties were included, 1065 TKA and 287 UKA. Postoperative data for 1325 arthroplasties were available. Postoperative complications were realized after 151 (11,4%) of the operations. The complication rates were: Death within 6 weeks 0,3%, deep infection 1,2%, DVT and/or PE 1,1%, surgical treatment and/or manipulation for arthrofibrosis 3,2%, patellar fracture or dislocation 1,2%, peroneal palsy 0,5% and other complications 4,8%. Complications were more frequent after TKA than after UKA (12,6% v. 7,0%, p=0,008). Re-operation was necessary due to postoperative complication in 54 cases (4,1%), respectively 48 (4,8%) and 6 (2,1%) for TKA and UKA (p>0,05).
CONCLUSION: Postoperative complications after knee arthroplasty might be a major issue for the patient. In 54 patients (4,1%) re-operation was necessary. Complications were more frequent after TKA than after UKA.

Neogenesis of Hyaline Cartilage by Stimulation of Mesenchymal Stem Cells in TGF-beta-Coated 3-D Scaffolds

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INTRODUCTION: Articular cartilage injury remains a serious clinical problem. The human body has limited ability to respond to the damage, resulting in pain and reduced mobility of the patient. Therapeutic options of reconstructive surgery and articular chondrocyte implantation have not shown satisfying results, for which reason the development of articular cartilage with satisfying properties remains.
We suggest stimulating mesenchymal stem cells(MSCs) differentiation into chondrocytes, seeded in tissue engineered constructs suited for implantation into cartilage defects.
MATERIALS AND METHODS: Influence of specific growth factors is essential to the differentiation of MSCs and furthermore the cellular synthesis of mature hyaline cartilage depends on culturing in a 3-D environment.
We suggest stimulating the MSCs with transforming growth factor-, 1(TGF-, 1), an essential inducer of chondrogenic differentiation.
The MSCs are cultured in a 3-D scaffold, made from biodegradable polymeric chitosan, which is coated with TGF-, 1 to secure a local delivery and effect of the TGF-, 1. Once coated and seeded the differentiated MSCs will synthesize the mature hyaline cartilage matrix.
RESULTS: The TGF-, 1 is released from the scaffold in an initial boost followed by a smaller but continued release.
MSCs grow and differentiate in the 3-D environment of the scaffold.
CONCLUSION: The release kinetics of the scaffolds will initially boost and afterwards sustain the differentiation process of the MSCs. This together with the ongoing in vitro studies of the differentiation of MSCs support the relevancy of further investigation why the project will continue as planned.

Early experiences with the Gotfried percutaneus compression plating (PC.C.P) in pertrochanteric hip fractures

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INTRODUCTION: PC.C.P is a minimal invasive surgical system used for pertrochanteric hip fractures, developed to minimize operative trauma and blood loss, provide enhanced rotational stability and reduce fracture collapse.
Four randomized prospective studies (401 patients) comparing the PC.C.P with standard treatment (the dynamic hip screw) have been published. They all found significant reduction in peroperative blood loss with the PC.C.P. Other results in favour of the PC.C.P were earlier mobilisation, reduced postoperative pain, increased weight bearing at 6 weeks, less fracture collapse after healing, and reduced one year mortality. One study found a higher mechanical failure rate with the PC.C.P and emphasized the importance of anatomic closed reduction.
MATERIAL AND METHODS: Twenty-one patients with AO type 31-A1 and A2 fractures that allowed exact closed reduction were operated with PC.C.P. The posterior reduction device was used when necessary. Five surgeons performed the operations, 4 were orthopaedic trainees and operated 20 of the patients. X-rays were taken after the operation and 12 weeks later.
RESULTS: Mean age was 84.6 years (14 female). Mean operating time was 61 min (range 40-110) and mean operative blood loss was 125 mL (50-200). One patient was reoperated because of mechanical failure (a loose proximal screw). No infections or fracture collapse were observed after 12 weeks follow up.
CONCLUSION: Our provisional data indicates that patients with pertrochanteric hip fractures can be treated successfully with PC.C.P and the expected results concerning operation time, blood loss, stability, and fracture collapse can be obtained after a small number of patients, i.e. during the steep part of the learning curve. We find the PC.C.P device acceptable and safe in use.

The effect of gold coating on experimental implant fixation

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INTRODUCTION: Inserting an implant in bone is a traumatic invasive procedure causing primary local inflammation. Gold salts have previously been used against rheumatoid arthritis due to their anti-inflammatory effects. Recent studies show that metallic gold releases gold ions if placed in an organism. We therefore hypothesized that Ti implants with a thin gold layer would have an increased biocompatibility by suppressing the inflammation and thereby a better implant fixation.
MATERIAL AND METHODS: Nine dogs were used in the study. We inserted cylindrical plasma sprayed porous Ti implants with or without a gold coating in the proximal part of tibia. The implants were inserted press-fit. The study was paired with gold on one side and control implants on the contra-lateral side.
Four weeks later the implants were evaluated by mechanical push-out test and by histomorphometry. Separate sections were also made for autometallography (AMG).
RESULTS: Gold coating resulted in significantly reduced bone ingrowth ($p=0,05$). Mechanical fixation was significantly decreased with the gold implants in two of three parameters ($p<0,05$). AMG showed that gold ions had infiltrated the peri-prosthetic tissue.
CONCLUSION: Gilding of the implants resulted in reduced mechanical fixation and bone ingrowth. Therefore an alternative coating technique could be to dot parts of the surface with gold leaving most part of the highly biocompatible titanium surface of the implant exposed. This model would combine the inflammatory suppressing quality of bio-liberated gold ions with titanium's biocompatible surface.

To whom do the results of this trial apply: External validity of a randomised controlled trial including 130 patients scheduled for primary total hip replacement

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INTRODUCTION: Although, the randomised controlled trial (RCT) is regarded as gold standard in terms of evaluating the effectiveness of an intervention, its external validity has been questioned. RCTs can not be expected to produce results, that are directly relevant to all patients and all settings, but it should at least allow patients and clinicians to judge, to whom trial results can reasonably be applied.
The aim of this study was to asses the external validity of a RCT investigating the efficacy of a fast-track programme after total hip replacement.
MATERIAL AND METHODS: 130 patients were identified as potential participants.18 patients were excluded, 33 enrolled patients declined to participate, and 79 patients were enrolled and randomised .We studied the distribution of preoperative characteristics and postoperative clinical variables among these three groups.
RESULTS: A significant difference was found in both pre-operative characteristics and clinical outcome variables. The non-consenters were older, less healthy and needing more help from the home care system. Furthermore, they were hospitalised longer, and were more often transferred to a rehabilitation ward.
CONCLUSION: Our findings demonstrated the importance of patient inclusion criteria in RCTs. Moreover, they may account for the lack of reproducibility of RCT results in clinical practice dealing with fast- track programmes.
KEYWORDS: Non-participants, randomised clinical trials, external validity, fast-track programmes.

Early macrophage cytokine response to cobalt chrome molybdenum and titanium alloy surfaces

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INTRODUCTION: The success of the increasing use of CoCrMo alloys depends on the materials biocompatible properties. Titanium alloys are considered highly biocompatible and we hypothesized, that CoCrMo alloys generates a larger pro-inflammatory, proliferate, and chemotactic response than Titanium alloys.
MATERIAL AND METHODS: A murine macrophage cell line (J774) was incubated 8 hours with polished or rough discs consisting of either cast CoCrMo alloy, wrought high or low-carbon CoCrMo alloy, or wrought Ti_6Al_4V alloy. Empty wells with macrophages served as controls. Changes in pro- and anti-inflammatory cytokines [TNF-α, IL-6, IL-1α, IL-1ß, IL-10] and proteins known to induce proliferation [M-CSF], chemotaxis [MCP-1] and osteogenesis [TGF-, , OPG] were determined by ELISA and Real Time rt-PCR.
RESULTS: No significant differences in pro-inflammatory, proliferate, and chemotactic response were seen between Titanium and CoCrMo alloys. Significantly higher levels of TNF-α, IL-6, IL-1α, IL-1ß, M-CSF, MCP-1 as compared to the non-stimulated (control) response ($p<0.05$) were seen for all materials. TGF-ß showed a significant suppression of TGF-ß ($p<0.05$) for High Carbon CoCrMo discs compared to Cast CoCrMo and Ti_6Al_4V discs, and non-stimulated cells. No differences were observed between polished and rough discs.
CONCLUSION: No significant differences in pro-inflammatory, proliferate, and chemotactic response were seen between Titanium and CoCrMo alloys however a significant suppression of TGF-ß was seen for High Carbon CoCrMo discs. Whether this suppression persists over time and the clinical importance of the early (acute) macrophage response is at present unknown and awaits long-term investigations.

Primary stability of open-wedge osteotomies - the effect of calcium-phosphate cement. A biomechanical study performed on composite and cadaver bones

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INTRODUCTION: Medial open-wedge HTO is an alternative in the treatment of medial knee OA for the young and active patient. However this technique leaves an open gap that requires stable fixation to achieve bony healing. As a bone substitute injectable calcium-phosphate-cements could be an alternative to autograft.
MATERIAL AND METHODS: Biomechanical testings were performed on open wedge HTO to investigate load to failure and displacement after cyclic loading (viscous and/or damaged material response). A medial 10 mm open-wedge osteotomy was performed on 7 pairs of composite (Sawbone) left tibiaes, and 8 pairs of preserved cadaver tibiaes. Osteosynthesis where performed with the Dynafix system. In half of the bones the gap was filled with 15 g of Calcibon®. The composite tibiaes were loaded at a ramp speed of 20 mm/min and failures of the constructs were recorded visually. On the cadaver tibiaes, cyclical loading were performed with a maximum load of 2250 N.
RESULTS: Filling of the gap with Calcibon® resulted in significant different load-to-failure patterns with failure at 10.2 kN compared to 2.7 kN in the group without Calcibon®. Displacement at the end of cyclical loading was 1.2 mm in the group with Calcibon® and 2.7 mm in the group without Calcibon®. This difference also was significant.
CONCLUSION: The injectable calcium-phosphate-cement Calcibon® enhances primary stability during load to failure and during cyclical loading in open wedge osteotomies on proximal tibia. Clinical studies are performed to investigate whether Calcibon® has any clinical advantage on wedge healing and stability.

Nurse telephone triage and telephone consultations in departments of emergency care reduces the number of patients admitted to the departments of emergency care by 20%

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INTRODUCTION: 124.000 acute patients are admitted to the emergency care departments per year in the County of Aarhus, Denmark with 660.000 inhabitants. Practice nurses have shown to offer an effective treatment and triage of patients with minor illnesses who request acute management.
MATERIAL AND METHODS: In order to offer the inhabitants a prehospital telephone consultation and telephone triage prior to eventual admittance to the departments of emergency care, 40 emergency care nurses were educated and trained in interviewing, examination, diagnosing, triage systems, decision making and specific treatment procedures.
RESULTS: In the period from the 1st of June 2003 to the 31st of December 2004 a total of 118.235 telephone calls were registrated. The total number of patients admitted to the department of emergency care was reduced by 20%. 24% of the telephone calls needed no appointment with the department of emergency care. 18% of the patients were finally treated by the nurse telephone triage, 5 % were recommended an appointment with their family doctor and 1% needed referral to another department. 2/3 of the patients admitted to the department of emergency care had a phone call to the triage nurse prior to their admittance. The number of patients (20%) admitted by ambulance were unchanged. 98% of the phone calls were satisfied with the consultation.
CONCLUSION: Introduction of nurse telephone triage and telephone consultations reduces the number of admitted patients to the departments of emergency care by 20% in the County of Aarhus, Denmark. Telephone consultation is becoming a general accepted approach to patient care and improves public access to medical information and health service. In the future nurse telephone triage is recommended prior to hospital consultation and admittance.

Incidence of hemotoma and bleeding complications in patients with multiligament reconstruction in the knee and postoperative treatment with Arixtra (fondoparinux sodium)

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INTRODUCTION: We previously reported high incidence of severe hematoma and bleeding complications with usage of early postoperative (6-8 hour) administration of Arixtra (Fondoparinux sodium) in patients with knee ligament reconstructions. A modified regimen with treatment start 24 hours postoperatively was implemented to prevent these complications. This study reports incidence of hematoma and bleeding complications in a prospective series of multi-ligament reconstructions.
MATERIAL AND METHODS: In the first 6 months of 2006 19 patients with multi-ligament surgery received tromboprophylaxis with Arixtra with the first dose 24 hours postoperatively for five days. Bleeding and hematoma complications were registered at 2 days and 14 days postoperative follow-up.
RESULTS: Seven patients had minor sugillations (< 100 cm2), 5 had major sugillations but no further complication. 3 patients had persistent wound bleeding for more than 2 days. 6 patients had severe intraarticular hemotomas. 3 of these patients were reoperated due to suspicion of infection. No positive cultures were found in these patients. 4 out the 19 patients were without any bleeding complications
CONCLUSION: This study reports high incidence of severe hematoma and bleeding complications with usage of early postoperative 24 hours after surgery. A randomized study is needed to define Arixtra induced bleeding complications in knee ligament surgery and efficacy for DVT prevention .

Microdialysis can monitor lumbar muscle metabolism and damage during spinal instrumentation, in different positions and activity

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INTRODUCTION: Microdialysis is a minimal invasive sampling technique that can be used to monitor tissue metabolism in vivo. The relative interstitial concentration of basic metabolic substances such as glucose, lactate, glycerol, pyruvate and glutamate can be estimated thus documenting the impact of the surgical trauma on a tissue level. The purpose of this study was to analyze if there is a difference in concentration in regard to position and activity in lumbar muscular tissue and to measure tissue metabolism and damage during lumbar spinal instrumentation.
MATERIAL AND METHODS: For the first part of the study five men and three women age 24 (23-26) years old volunteered after informed consent. In the lumbar erector spinae two catheters were placed and one catheter in the deltoid muscle as a reference. After 40 minutes of stabilization dialysates were obtained every twenty minutes, one hour prone, one hour supine and one hour walking. For the 2nd part of the study five men age 53 (38-61) years old scheduled for lumbar spinal instrumentation volunteered after informed consent.
RESULTS: Glucose, lactate and glycerol were constant prone, supine and walking. Pyruvat increased but lactate/pyruvate ratio was constant. Glutamate had a recovery time > 120 minutes and did not stabilize. There was no difference between lumbar or deltoid muscle dialysates. During surgery glucose remained constant 5.8 mM (3.3 – 7.8) with no difference between lumbar or deltoid muscle. Lactate increased from 2.0 to 3.0 mM (0.7 – 5.8) and pyruvate increased from 50 to 110 μM (22 – 300) in both lumbar and deltoid muscle. The lactate/pyruvate ratio increased from 25 to 60 in the lumbar muscle and from 25 to 40 in the deltoid muscle. Glycerol was constant 141 μM (40 – 427) in the deltoid muscle and constant 263 μM (58-576) in the lumbar muscle. Glutamate had a recovery time > 120 minutes and did not stabilize.
CONCLUSION: Position and activity did not influence concentrations of basic metabolites in microdialysates from the lumbar erector spinae muscle. The results are reproducible. Metabolism is increased more in the lumbar than in the deltoid muscle during surgery. Based on glycerol measurement there is a significant damage to the lumbar muscle. The method can be used to monitor muscle metabolism and damage during lumbar spinal instrumentation.

Diabetes is a risk factor for dislocation after primary total hip arthroplasty

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INTRODUCTION: The incidence rate of dislocation after a primary total hip arthroplasty remains unchanged, though risk factors for dislocation have been investigated for years.
AIM OG THE STUDY: The aim of this study was to examine risk factors including behavioural factors and chronic diseases.
MATERIAL: A five-year historical prospective study was conducted in a Copenhagen University Hospital. Data were collected from medical records of 547 primary total hip arthroplasties representing 449 patients operated from January 1998 to January 2003. The outcome of the study was whether or not dislocation occurred within 24 months from operation.
RESULTS: The dislocation rate was 11.8% for women and 8.5 % for men. A univariate analysis showed that age, previous hip fracture on the same side, diabetes mellitus, cerebral dysfunction and length of operation were associated to the risk of dislocation. In a multiple logistic regression analysis age, diabetes and length of operation showed to be independent risk factors for dislocation. Diabetes was significantly related to increaed frequncy of dislokation with an OR 4.06(p=0.005). Age was significantly associated with a 40% increased risk of dislocation per additional ten years (P=0.013). Length of operation had more than a twofold-increased risk of dislocation per additional hour (OR 2.19 (p=0.022).
CONCLUSION: Diabetes turned out to be a predictor for hip dislocation with a fourfold-increased risk.

Long-term Changes Around the Exeter Stem after Total Hip Arthroplasty (THA) – a prospective study with 60 months follow-up

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INTRODUCTION: Implantation of a THA changes the strain distribution pattern in the proximal femur, with a loss of stress proximal in the femur and an increase in stress distal of the femoral component.The purpose of this study was to quantify changes in BMD during long-term follow-up, i.e. five years, after insertion of the collarless, two-side conical, cemented Exeter stem.
MATERIAL AND METHODS: 18 patients (all women), aged 55 to 80 years, undergoing THA were included in the study. BMD was measured in 7 regions of interest according to Gruen et al., using Dual Energy X-ray Absorptiometry, postoperatively, after 18 and 60 months of follow-up. At the same time, the contra lateral hip and spine were scanned. Results were tested using Wilcoxon matched-pairs signed-rank test. P values below 0.05 were considered significant.
RESULTS: During the first 18 months, a significant decrease in BMD was present in Gruen zones 2, 3, 6, and 7. No significant changes were seen in BMD of the zones 4, and 5 in the contra lateral hip, nor at the spine. In zone 1 there was a small but significant rise in BMD. From 18 to 60 months of follow up we observed a significant rise in BMD in all Gruen zones but zone 4 and 7. Despite this the total periprostetic BMD decreased during the study periode. There was no significant decrease in BMD in the contra lateral hip. In the spine, we observed a significant rise in BMD.
CONCLUSION: During short-term follow-up (i.e. 18 months) after THA, BMD decreased in Gruen zones 2, 3, 6 and 7. The bone loss is similar to findings in other implants and seems to be related to the changes in stress pattern within the proximal femur. During long-term follow-up (i.e. 5 years) BMD increased again in these zones, however, BMD remained lower than baseline.

Reduced Hospital Stay and Narcotic Consumption and Improved mobilization with use of Local and Intraarticular Infiltration after Primary Total Hip Arthroplasty

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INTRODUCTION: A new technique of wound infiltration combined with intraarticular injection of local anesthetics for pain relief after total hip arthroplasty (THA) was compared with the well-established practice of epidural infusion.
MATERIAL AND METHODS: Eighty patients undergoing elective THA under spinal block were randomly assigned to receive either continuous epidural infusion (Group EPI) or infiltration around the hip joint with a solution of 100 ml ropivacaine 2 mg/ml, 1 ml ketorolac 30 mg/ml, and 1 ml epinephrine 0.5 mg/ml at the conclusion of surgery combined with one postoperative intraarticular injection of the same substances through an intraarticular catheter (Group ART).
RESULTS: Narcotic consumption was significantly reduced in Group ART compared to Group EPI ($P = 0.004$). Pain levels at rest and during mobilization were similar in both groups but significantly reduced in Group ART after cessation of treatment. Length of stay was reduced by 2 days in Group ART compared with Group EPI ($P < 0.001$)
CONCLUSIONA: Wound infiltration combined with one intraarticular injection can be recommended for patients undergoing THA. Further studies of dosage (high/low) and duration of intraarticular treatment are warranted.

Preliminary results of hip-resurfacing

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INTRODUCTION: Hip-resurfacing (HR) has been introduced as an alternative to traditional Total Hip Arthroplasty in the younger and active patient. We present the very early experience with HR in our department using two prostheses with different guide systems.
MATERIALS AND METHODS: From November 2004 until May 2006, 49 patients (54 hips) were operated on with 27 Re-cap (3 bilateral) and 27 Durom (2 bilateral) prosthesis. 41 patients were males (5 bilateral). Median age was 55 years (31-66). Preoperative diagnoses were: 38 arthrosis (4 bilateral), 8 developmental dysplasia (1 bilateral), 4 avascular necrosis, 2 rheumatoid arthritis, 1 Mb. Bechterew, and 1 sequelae after a hip joint infection.
RESULTS: At 3 months follow-up all patients were pain free except for 2 patients, of whom 1 had constant pain on walking and 1 had slight pain after walking 5-8 km. Operating time: median 118 min (81-159). Blood loss: median 725 ml (100-1725). One patient sustained a femoral neck fracture after 45 days requiring re-operation with an uncemented femoral component and a large head, in 2 patients the laterally placed guide pinn was not removed at the end of the procedure. Three patients had peroneal nerve palsy, two resolved quickly, but one was not fully remitted after 3 months. All patients were satisfied except 2 (the patients with persistent pain and peroneal palsy). The 9 patients so far seen at 1 year follow-up are all still satisfied with no new complications observed.
CONCLUSION: Patients with HR are satisfied in the very short term, though 2 serious complications were observed.
We find the results promising and safe although the number of peroneal palsies is high. Further randomized studies are planned.

Long-term mortality and hip survival after osteosynthesis and hemiarthroplasty in displaced femoral neck fractures in 75+ year patients

Ole Ovesen (1), Bjarke Viberg (2), Jens Lauritsen (1)
(1) Department of orthopaedic surgery, Odense University Hospital,
(2) Department of orthopaedic surgery, Svendborg Hospital

INTRODUCTION: Treatment of displaced femoral neck fractures has long been debated. Recent literature now seem to favour prosthetic replacement in 70+ year individuals. Selection bias and relatively short follo w up however may still be of concern.
PATIENTS AND METHODS: 313 unselected patients were prospectively randomized to internal fixation using 2 percutaneous screws or a DHS from 1991-1993 (OUH). In this study a subgroup of 180 patients 75+ year with displaced fracture was compared to a consecutive series of 180 similar patients, operated during the same period, at Svendborg Hospital using an uncemented bipolar hemiarthroplasty. Mortality and any reoperation was analysed until 1st July 2006 using Patient Administrative System and The National Register of Patients. Analysis: Kaplan-Meier Technique with 95% CI. Hip survival after osteosynthesis was defined as: the proximal fragment not being removed during arthroplasty or resection. Two end-points after hemiarthroplasty was defined; 1) revision or removal of the prosthesis, 2) periprosthetic femoral fracture. Isolated implant removal after internal fixation and dislocation managed by closed reduction was not considered a major complication.
RESULTS: The 2 groups were comparable regarding age and sex and showed no difference in mortality. After 10 years only few study subjects survived. Hip survival after osteosynthesis declined rapidly until 4 years and was 77% (CI 68-83%) after 10 years. Hip survival after hemiarthroplasty declined steadily and was at 10 years 91% (CI 82-95%) using end point 1, but only 73% (CI55-85%) for end point 1 and 2.
CONCLUSION: In this long term follow up no difference in major complications could be demonstrated. Future studies should focus on tools to differentiate treatment,quality of life and hip function.

Radiographic changes after pelvic osteotomy in cerebral palsy

Rune Ege Gade Maagensen, and Stig Sonne-Holm
Department of orthopaedic surgery,
Hvidovre University Hospital, Copenhagen

INTRODUCTION: Children with cerebral palsy (CP) oftentimes subluxates or dislocates the hip joint due to spasticity and secundary dysplasia. An innominate osteotomy (IO) can help avoiding this, and thus reduce pain, improve walking and sitting.
MATERIAL AND METHODS: The aim of the study was study the radiographic changes and the frequency of reoperation in relation to primary radiographs in a retrospective design. We measured femoral head extrusion index (FHEI), acetabular index (AI), center-edge angle (CE), break of Shentons line (SH), angle of collum femoris (CF) before and one year after (range 37 days – 23 month) a pelvis osteotomy and at follow up (mean 3year 9months; range 14 month – 7 years 10 months) among 33 children with CP.
Only the first IO of a child was included in the study to eliminate wrong sample unit. Among 33 patients included 8 were excluded due to image quality (hip flexion contractures) or missing images.
RESULTS: Of 25 included hips, 2 had a reoperation, a failure rate of 8%. A logistic regression analysis showed no variable having an impact on reoperation ($p>0,15$). All radiographic variables improved after operation (all $p<0.009$), and the changes did not revert at follow up (all $p>0.25$).
CONCLUSION: Innominate osteotomies of children with CP remain stable over a period of 4 years. It is not possible based on the current material to identify the hips at risk for a reoperation. However because of unreadable plain radiographs among tetraplegic patients with hip contractions selection bias is present. This is also evident giving a reoperation rate of 17% on all 42 hips, compared to the 8% of the included 25.

Soaking morselized allograft in bisphosphonate impairs implant fixation

Thomas Jakobsen, Jørgen Baas, Joan. E. Bechtold, Brian Elmengaard, Kjeld Søballe
Ortopædisk Forskningslab, Århus Sygehus

INTRODUCTION: For arthroplasties with reduced bone stock at implantation site, the use of morselized allograft is a well established way of optimizing the early implant fixation. It has been shown that soaking structural allograft in bisphosphonate can reduce graft resorption and increase bone formation. The aim of this study was to investigate whether the same results could be obtained when soaking morselized allograft in bisphosphonate, and to investigate whether this treatment would increase biomechanical fixation of allografted implants.
MATERIAL AND METHODS: In eight dogs, a pair of Ti-implants surrounded by a 2.5 mm gap was inserted into each humerus during two consecutive surgeries. The gap was either filled with bisphosphonate (alendronate) soaked or saline (control) soaked allograft. During first surgery one pair of implants (alendronate and control) was inserted into one humerus. During second surgery, 8 weeks after first surgery, a second pair of implants was inserted into the contralateral humerus. The first pair of implants was observed for 12 weeks, the second pair for 4 weeks. Implants were evaluated by histomorphometry and mechanical push-out test.
RESULTS: Soaking allograft in alendronate resulted in:
- Marked decrease in all biomechanical parameters (range: 30-109 fold) when comparing with control (all $p<0.001$).
- Almost complete blockade of new bone formation both on the implants and in the gap ($p<0.001$).
- Preservation of the allograft around the implants compared with control implant (average 6-fold more allograft around the bisphosphonate implants) ($p<0.001$).
CONCLUSION: Soaking allograft in alendronate resulted in a catastrophic implant fixation. This study warrants caution for implementing bisphosphonate soaked allograft in a clinical setting.

Does hydroxyapatite increase polyethylene wear? A randomised study on total hip arthroplasty with twelve-year follow-up

Maiken Møller-Pedersen, Cody Bünger, Ole Rahbek, Kjeld Søballe
Ortopædkirurgisk afdeling, Århus Sygehus.

INTRODUCTION: Hydroxyapatite (HA) coating promotes strong bony ingrowth and early implant stability which is believed to prolong the lifespan of uncemented total hip arthroplasty (THA). However, it has been suggested that HA coating creates loose HA particles that cause third-body wear between the articulating surfaces. HA coating may therefore increase the production of excessive polyethylene (PE) particles leading to periprostetic osteolysis, loosening and limited implant longevity.
MATERIAL AND METHODS: 28 patients were originally randomized in 1990-91 to receive THA with either titanium (Ti) alloy or HA coating. Migration of the femoral stem was evaluated with RSA by Søballe et al. Conventional UHMWPE liner, Universal hexloc cup and 28 mm cr-co femoral head was used. 22 patients were available for twelve-year follow-up or endpoint revision/death. Two-dimensional femoral head penetration into the PE liner was measured with Polyware Digital Version.
RESULTS: Mean linear PE wear in the Ti group (n=10) was 3.8 mm (SD 0.9) with a wear rate of 0.38 mm/year (SD 0.14). Mean linear PE wear in the HA group (n=12) was 4.8 mm (SD 2.6) with a wear rate of 0.46 mm/year (SD 0.26). There was no statistical difference in linear wear and wear rate between the two groups ($p>0.40$). The results are independent of the follow-up time. One Ti and four HA cups were revised due to aseptic loosening within the period of follow-up. No femoral stems were revised. Mann-Whitney test was used.
CONCLUSION: There was no statistical evidence ($p>0.40$) demonstrating that HA coating increased third-body wear of a UHMWPE liner compared with Ti coating. A limitation is the risk of type 2 error. On the other hand, this is the first randomized study with long-term follow-up presenting data on PE wear of HA vs. Ti coated implants.

Preliminary results with a new, rapid, qualitative urine test to detect persistent coagulation activation after elective hip arthroplasty

Lars Borris[1], Michael Lassen[2], Morten Breindahl[3], Camilla Ryge[2]
[1]Dept. of Orthopedics, Århus University Hospital, Århus,
[2]Dept. of Orthopedics, Hørsholm hospital, Hørsholm,
[3]BESST-TEST, Lyngby, Copenhagen.

INTRODUCTION: In order to be able to individualize the duration of pharmacologic thromboprophylaxis, we have evaluated a new, rapid qualitative urine test to detect persistent coagulation activation. The test is developed as a dip-stick device consisting of a one step rapid lateral flow immunoassay with visual readout with one test line and one control line. The assay time is between 5 and 10 minutes.
MATERIAL AND METHODS: Spot urine samples were collected in 113 patients undergoing elective hip arthroplasty preoperatively and on day 5 after operation and frozen immediately and stored until analysis. Pharmacologic thromboprophylaxis was administered until day 7±2 after the operation. The results of the new dip-stick device were compared with the results of a laboratory method, using a commercially available ELISA kit and a preset cut-off value. Patients were followed for development of vascular thrombotic complications/unexpected death until day 90 after the operation.
RESULTS: 10 patients experienced an event during the study: 2 died unexpectedly and 8 had a vascular thrombotic event. The accuracy of the dip-stick test was acceptable with a sensitivity of 100% and a negative predictive value of 100%. The test would be able to exclude about one third of the patients from further extension of thromboprophylaxis beyond the first week.
CONCLUSION: The new dip-stick urine test was very easy to use, had a high negative predictive value and sensitivity and thus appears to be safe.

Dansk Selskab for Håndkirurgi
Efterårsmøde 2006

Onsdag den 25.10. 2006, kl. 13.00 i Hansens Gamle Familiehave, Pile Allé10-12, Frederiksberg

Program

13.00	Velkomst
13.15	Overblik over proteseaktivitet i Danmark (15 min.)
13.30	Christer Sollerman, Göteborg, Status over endoproteser i hånden (60 min.)
14.30-15.00	Kaffe, (30 min.)
15.00	Dorte Engelund, Hillerød, Interpositionsoperationer, (15 min.)
15.15-15.45	Ergoterapeut Inge Helleberg, Århus: Optræning og rehabilitering efter fingerproteser Ergoterapeut: ... Optræning og rehabilitering efter håndledsproteser
16.00-16.30	Kaffe: (30 min.)
16.30	Oplæg/ paneldiskussion om kliniske databaser (30 min.)
17.00	**Frie foredrag** A NOVEL MURINE MODEL OF FLEXOR TENDON GRAFTING AND ADHESION FORMATION **Hasslund, S; *Jacobson, JA; *Dadali, T; *Mitten, DJ; **Søballe, K; *Schwarz, EM; *O'Keefe, RJ; + *Awad, HA; **Ulrich-Vinther, M;
18.00	**Generalforsamling**
19.00	**Middag,**

Tilmelding til middagen ved indbetaling af kr 400, til Dansk Selskab for Håndkirurgi, reg. nr. 1551, konto nr. 6881092 med angivelse af navn, senest den 10/10-06

Følgende firmaer udstiller ved mødet: Biomet, LJ-Medical, Parko, Protesekompagniet, Swemac, Viking Medical

Indkaldelse til generalforsamling i Dansk Selskab for Håndkirurgi

Onsdag den 25.10. 2006, kl. 18.00 i Hansens Gamle Familiehave, Pile Allé 10-12, Frederiksberg

Dagsorden:

Valg af dirigent

Fremlæggelse og godkendelse af bestyrelsens beretning

Fremlæggelse og godkendelse af revideret regnskab

Vedtagelse af kontingenter for 2007

Optagelse af nye medlemmer

Valg af bestyrelsesmedlemmer. Henrik Schrøder, Lis Barfred og Karsten Krøner er på valg, alle genopstiller

Valg af revisor

Indkomne forslag

Eventuelt.

Forslag i henhold til punkt 8 bedes fremsendt til formanden

henrik.schroeder@ouh.fyns-amt.dk senest den 10/10-06

Åbent bestyrelsesmøde DOT (Dansk Ortopædisk Traumeselskab)

Torsdag d. 26.10.06 kl. 10:00 - 12:00
Radisson SAS Scandinavia Hotel

Alle interesserede i Traumatologisk Ortopædkirurgi indkaldes hermed til åbent bestyrelsesmøde i Dansk Ortopædisk Traumeselskab (DOT) med følgende punkter:

1. Beretning fra formanden
2. Behandling af de svære frakturer. Hvem skal behandle disse?
3. Traumebehandling i Danmark. Hvad med ortopædkirurgen?
4. Hjemmesiden. Forslag til indhold. Skal vi lave et lukket Chat-net, hvor vi kan forespørge kollegaer om behandlingsmuligheder?
5. Rekruttering af nye traumatologisk interesserede medlemmer til selskabet
6. Eventuelt

MVH
Søren W Rasmussen

DSHK Symposium
Radisson SAS Scandinavia Hotel, København

26. oktober 2006 kl. 10-12

PROGRAM

Chairman: *Jens-Erik Varmarken*

10.00-10.40 Årsrapport 2006 fra Dansk Hoftealloplastik Register
Ulf Lucht, Århus.

10.40-11.15 Årsrapport 2006 fra Dansk Knæalloplastik Register
Bjarne Lund, København

11.15-12.00 **Kirurgiske adgange til hofteleddet**

11.15-11.25 Den posteriore adgang:
Ole Ovesen, Odense

11.25-11.35 Den laterale adgang:
Henrik Erichsen, Charlottenlund

11.35-11.45 Direkte forreste adgang ved cementeret total hoftealloplastik a.m. Exeter.
Erfaring fra cadaver-studie og de 10 første kliniske cases
Per Kjærsgaard-Andersen, Vejle

11.45-12.00: Diskussion

Med venlig hilsen
Jens-Erik Varmarken
Formand DSHK

Dagsorden for DPOS møde
Radisson SAS Scandinavia Hotel

Torsdag 26.10.2006 kl. 10-12

- Valg af dirigent
- Børneortopædi i regionerne
- Oplæg ved Bjarne Møller-Madsen
- Nyt fra nedsatte grupper.
- Medlemmernes medbragte cases
- Evt.

Søren Harving

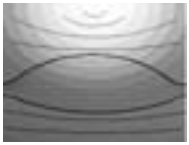
Dagsorden for DFAS møde
Radisson SAS Scandinavia Hotel

Torsdag den 26. oktober kl. 10-12

Kl. 10.00-10.45: Professor Søren Overgaard: Klinisk dokumentation for anvendelse af knoglesubstitutter

Kl. 11.00-12.00: Generalforsamling

Erik Kragh Petersen



Dansk Ultralyddiagnostisk Selskab

10th ANNIVERSARY SYMPOSIUM
for the Musculoskeletal Ultrasound Course
Radiologisk afdeling, RIGSHOSPITALET
14. - 15. oktober 2006

I 1997, blev det første danske kursus omhandlende udelukkende muskuloskeletal ultralyddiagnostik afholdt på ultralydafdelingen, Herlev sygehus. Interessen har efterfølgende været stor og kurset bliver i 2006 holdt for 10. år i træk. Kursusledelsen er meget glad for at kunne fejre fødselsdagen med dette symposium, som uddyber ultralyddiagnostikken indenfor to ofte besværlige anatomiske områder: hofte-lyske-femur regionen og nerverne i overekstremiten. International højt anerkendte muskuloskeletal ultralyd eksperter er inviteret til at fremlægge deres erfaring.

Sted - Form:	Auditorium 2, Opgang 44, Rigshospitalet. 2 dages symposium (kl. 8.00 - 13.00).
Målgruppe:	Radiologer, Ortopædkirurger, Reumatologer og andre interesserede.
Language:	English
Indhold:	Day 1 (Saturday 8.00 - 13.00): Hip, Groin and Thigh: Trauma and Overuse Day 2 (Sunday 8.00 - 13.00): Ultrasound of the Nerves of the Upper Limb

Program kan findes på www. duds.dk

Anbefales af:	Dansk Radiologisk Selskab Dansk Reumatologisk Selskab European Society of Musculoskeletal Radiology (ESSR)
Kursusledere:	Michel Court-Payen, Overlæge, PhD, Radiologisk afd, Ultralydsektionen, Rigshospitalet Ole Schifter Rasmussen, Overlæge, Røntgenafdelingen, Randers Centralsygehus Per Hölmich, Overlæge, Ortopædkirurgisk afdeling, Amager Hospital
Gæsteforelæsere:	**Philippe Peetrons**, Centre Hospitalier Molière, Bruxelles, Belgium **Philipp O'Connor**, Dept of Radiology, Leeds General Infirmary, Leeds, **Carlo Martinoli**, Dept of Radiology R, University of Genoa, Italy **Gerd Bodner**, Dept of Radiology, University Hospital Innsbruck, Austria
Kursusafgift:	750 kr., som inkluderer kaffe.
Sekretariat:	Hanne S Grossjohann, Læge, PhD-stud, Radiologisk afd, Ultralydsektionen, Rigshospitalet Caroline Ewertsen, Læge, PhD-stud, Radiologisk afd, Ultralydsektionen, Rigshospitalet Linda Schuman, Sekretær, Radiologisk afd, Rigshospitalet
Tilmelding:	Senest den 1. oktober 2006 per E-mail til Linda Schuman, muskel@duds.dk

DANSK SELSKAB FOR ARTROSKOPISK
KIRUGI OG SPORTSTRAUMATOLOGI

6. Internationale symposium

"ACL on a crossroad"

Afholdes 2.- 3. november 2006
Comwell, Roskilde

Fakultet:
Stephen Howell
Andrew Amis
Ejnar Eriksson
Andreas Imhoff
Mikael Strobel
Lars Engebretsen
Magnus Forssblad
Peter Faunø
Bent W. Jakobsen
Poul Tordrup

Tilmelding kan alene ske via www.saks.nu

Bestyrelsen

Idrætsmedicin – DIMS Trin II

Formål og indhold
DIMS Trin II et videregående, overvejende teoretisk kursus, som skal bibringe kursisterne nyeste, evidensbaserede viden inden for en række emner om idræt og træning i relation til sundhed og sygdom herunder lungesygdomme, hjertesygdomme, reumatologi (osteoporose, arthritis, arthrose), diabetes, fedme, endokrinologi, børn, ældre. Artroskopi og idrætstraumatologi, motion på recept, idrætslægens arbejde. Kursisterne bliver præsenteret for seneste viden indenfor seneskeder, som eksempel på en idrætsmedicinsk frontlinieforskning. Besøg på landets førende idrætsmedicinske forskningsenhed på Bispebjerg Hospital, hvor kursisterne selv får lejlighed til at gennemgå en række fysiologiske test ved Team Danmarks testcenter.
Kurset giver 40 CME og udgør anden del i den postgraduate diplomuddannelse i idrætsmedicin i Dansk Idrætsmedicinsk Selskab (DIMS) regi.

Målgruppe
Læger som ønsker diplom som idrætslæge. Videregående kursus for læger fra alle tre søjler med en vis klinisk erfaring (med ret til selvstændigt virke som minimum), som har gennemført DIMS Trin I kurset eller fået dispensation herfor ved skriftlig begrundet ansøgning til DIMS uddannelsesudvalg. Maks. 30 kursister.

Form
Eksternat. Katedral undervisning med teoretiske indlæg fra underviserne og efterfølgende diskussion.

Kursusledelse
Henrik Aagaard, ortopædkirurgisk afd. M, Bispebjerg Hospital.

Undervisere
Førende eksperter med idrætsspecifik viden indenfor de forskellige specialer. Lars Juel Andersen, Marianne Backer, Vibeke Backer, Hans Bonde, Christian Couppé, Flemming Dela, Stig Eiberg, Freddy Gleisner, Birthe Stenbæk Hansen, Andreas Hartkopp, Michael Kjær, Benny Larsson, Michael Bachmann Nielsen, Bente Klarlund Petersen, Bente Stallknecht, Charlotte Suetta, Trine Torfing, Henrik Aagaard.

Tid
Uge 46. Mandag-fredag 13.- 17. november 2006.

Sted
GlaxoSmithKline (mandag-torsdag), Nykær 68, 2605 Brøndby. Bispebjerg Hospital (fredag), Bispebjerg Bakke 23, 2400 København N.

Kursusafgift
Medlemmer af DIMS: Yngre læger 4.000 kr., speciallæger 4.500 kr. Ikke medlemmer af DIMS: Yngre læger 4.500 kr. speciallæger 5.000 kr.

Kursussekretær
Charlotte Blomberg, e-mail: jenoe@get2net.dk

Tilmelding
Senest 1. oktober 2006 på www.sportsmedicin.dk eller send e-mail med navn, adresse, lægelig søjle og eventuelt medlemskab af DIMS til kursussekretær Charlotte Blomberg, e-mail: jenoe@get2net.dk
Betaling ved tilmelding på BG bank reg. 1551 kontonr. 16023337. Først tilmeldte har fortrinsret og vær opmærksom på, at tilmeldingen først gælder, når kursusafgiften er betalt. Husk ved betaling at anføre dit navn og navn på kurset (Trin II).

Svømmemedicinsk symposium November 2006

Svømning er Danmarks 3. største idrætsgren med 124.000 udøvere. Selvom svømning anses for en "sund" træningsform er skadefrekvensen blandt elitesvømmere høj, og mange svømmere må stoppe karrieren pga. skader.
En del af disse skader kan undgås, og andre kan vha. rigtig behandling forhindres i at blive kroniske. For at belyse dette indbyder DIMS og FFI i samarbejde med Dansk Svømmeunion til svømmemedicinsk symposium 16. - 17. november 2006 i Kastrup svømmehal, København.

EMNER
Epidemiologi af svømmeskader
Screening
Biomekanik og teknik
Svømmerskulder og knæproblemer
- årsager
- skadetyper/klinisk billede
- behandling
- forebyggelse
- cases

Ryg/truncus/core-stabilitet i relation til svømning
Billeddiagnostik/Ultralyd
At være elitesvømmer
At være elitetræner
Styrketræning af unge
Anstrengelsesudløst astma
Overtræning

UNDERVISERE
De mest kompetente danske foredragsholdere samt flere udenlandske specialister, bla. allerede tilsagn fra Klaus Bak, Peter Faunø, Connie Linnebjerg, Flemming Enoch, Susanne Brokop, Ricki Clausen og Mette Jakobsen.

MÅLGRUPPE
Alle læger og fysioterapeuter der der har svømmere som patienter. Idrætsfysiologer. Svømmetrænere.

FORM:
vekslen mellem teori og patient cases samt vandaktiviteter

TID OG STED
16. - 17. november 2006, Kastrup svømmehal, København.

TILMELDING
Via www.sportsmedicin.dk/kurser
Her vil også detaljeret program og pris fremgå.

Håndkirurgisk dissektionskursus

Mandag d. 18. og tirsdag d. 19. december 2006

Panum Instituttet, Anatomisk sektion.
Københavns Universitet, Blegdamsvej 3, 2200 Kbh. N

Kurset afholdes for 11. gang, også denne gang i samarbejde med håndkirurgisk afdeling Malmø, Lunds Universitet, Sverige.

Målgruppe
Kurset henvender sig specielt til ortopædkirurger i Danmark med interesse eller arbejdsområde indenfor håndkirurgien samt svenske læger, håndkirurgisk uddannede eller i håndkirurgisk uddannelsesstillinger.

Kursusleder
Overlæge Niels Søe Nielsen, afdelingsleder dr. med. Finn Bojsen-Møller og overlæge dr. med. Lars Dahlin.

Indhold
Kurset består af primær intensiv instruktion og efterfølgende kursistdissektion under supervision. De enkelte anatomiske regioner og strukturer gennemgås sammen med operationsadgange.
Kurset afholdes over 2 dage med sammenlagt 12 timers undervisning. Kurset er inkl. dissektionsmappe, materiale, kaffe/the, brød, frokost. Mandag aften middag.
Råder man over lup-briller til finere dissektion arbejde, vil det være en fordel at medtage disse.

Kursusform
Teoretisk + præp. hånd, underarm og albue.

Kursuspladser
16 deltagere fra Danmark og Sverige.

Akkreditering
DK 12 CME-point
S 10 CME-point

Kursusafgift
3.575,- d.kr.

Tilmelding
Dette års kursus er på nuværende tidspunkt overtegnet. Der er mulighed for at blive noteret på venteliste.
Stiles til e-mail n.vendel@c.dk

Hjemmeside
www.handdissection.dk

Med venlig hilsen

Niels Søe Nielsen
overlæge
Håndkirurgisk afsnit T-1
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Nina Vendel
sygeplejerske
Ortopædkirurgisk afdeling T
KAS Gentofte
e-mail: nini@gentoftehosp.kbhamt.dk

Fagforum for Idrætsfysioterapi

Dansk Idrætsmedicinsk selskab (DIMS)og FFI
inviterer til kursus for fysioterapeuter og læger
Akutte og kroniske hoftesmerter
hos børn, unge og atleter

Coxitis, epifysiolyse, bursitis, stressfraktur, labrumlæsioner, indvendig eller udvendig springhofte, degenerative lidelser. Hoftesmerter hos unger og atleter indbefatter en vid række differentialdiagnoser. Manglende kendskab til genesen bag hoftesmerter hos yngre og atleter medfører ofte en underdiagnosticering og insufficient behandling hos disse grupper. En gennemgang hoftens anatomi og undersøgelsesteknikker samt kendskab til parakliniske undersøgelses-, og behandlingsmuligheder vil kan fremme udredningen, rådgivning og behandling.
Hvor langt kan man komme med undersøgelser i almen praksis, hvilke undersøgelser bør man foretage. Sandsynlige diagnoser hos børn, unge og voksne. Skal man behandle med NSAID, aflastning, ændret træning, injektioner, skoindlæg eller skal der henvises til MR artrografi og artroskopi?

Målgruppe:
DIMS medlemmer, ortopæder, læger, der arbejder med idrætsmedicin, børnelæger, almen praktiserende. Fysioterapeuter, der er medlem af FFI og fysioterapeuter, der i øvrigt arbejder med idrætsfysioterapi.

Målsætning:
Øget kendskab til sygdomme og årsager til hoftesmerter hos børn, unge og atleter med relevante differentialdiagnoser. Øget kendskab til hoftens anatomi og biomekanik, til undersøgelsesteknikker i hoften med prakti-

ske øvelser. Viden om relevante parakliniske undersøgelser og behandlingsmuligheder ved hoftesmerter hos ovenstående gruppe. Hvornår er der indikation for diagnostisk og terapeutisk hofteartroskopi.

Kursusform: 2 dages eksternatkursus som en kombination af teori og praktiske øvelser, hvor kursusdeltagerne efter gennemgang foretager relevante øvelser og undersøgelsesteknikker på hinanden.

CME Points: 15 CME points i DIMS regi.

Tid og sted: København d. 8. og 9. januar 2007.

Kursusleder/undervisere: Kursusledere: Marianne Nygaard og Andreas Hartkopp.
Undervisere: Finn Bojsen-Møller, Niels Ellitsgaard, Andreas Hartkopp, Peter Rheinlænder, Trine Torfing , Michael Bachmann Nielsen, Per Hölmich, Kjeld Søballe.

Pris: 2.300 kr. for medlemmer og 2700 for ikke medlemmer. Frokost og kaffe inklusive. Max. 24 deltagere.

Tilmelding: Senest 12. december 2006. Send e-mail med navn, adresse og eventuelt medlemskab af DIMS til kursussekretær Charlotte Blomberg, e-mail: jenoe@get2net.dk. Du kan også tilmelde dig via DIMS hjemmeside www.sportsmedicin.dk under kurser (det røde link i øverste højre hjørne). Betaling ved tilmelding på BG bank reg. 1551 kontonr. 16023337. Først tilmeldte har fortrinsret og vær opmærksom på, at tilmeldingen først gælder, når kursusafgiften er betalt. Husk ved betaling at anføre dit navn og navnet på kurset.

Arrangør: Dansk Idrætsmedicinsk Selskab (DIMS), Fagforum for Idrætsfysioterapi (FFI).

THE INTERNATIONAL SOCIETY FOR THE STUDY OF THE LUMBAR SPINE ISSLS

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ANNOUNCEMENT

The 34rd annual meeting of the International Society for the Study of the Lumbar Spine will be held in

HONG KONG, JUNE 10-14, 2007

If you are interested in attending the meeting, as a non member, you must have a paper on the program or be invited by a member. Deadline for abstracts is November 15, 2006. Please look on the internet at ISSLS.org under annual meetings for information regarding submitting an abstract which must be done one the web site.

In order to attend the meeting as a non member please contact the Secretary, Dr. Robert, Gunzburg, at Sunnybrook Health Science Center, Room MG 323, 2075 Bayview Avenue, Toronto, Canada, M4N 3M5.