

DOS BULLETIN



NR. 6 OKTOBER 2005 34. ÅRGANG

MØDER I FORBINDELSE MED DOS MØDET	3
UDSTILLING	3
MØDEOVERSIGT	5
PROGRAM	10
ABSTRACTS	28
BESTYRELSEN INFORMERER	83
UDDANNELSESUDVALGET INFORMERER	87
MØDER I FORBINDELSE MED DOS MØDET	88
DOT	88
SAKS	89
RYGINTERESSEGRUPPEN	90
DFAS	90
DSHK	91
DPOS	91
MØDER OG KURSER I DANMARK OG UDLANDET	94

DOS BESTYRELSE

Formand

Overlæge, dr.med.
Søren Solgaard
Ortopædkirurgisk afdeling O
Hillerød Sygehus, Helsevej 2
3400 Hillerød
E-mail: soso@fa.dk

Næstformand

Professor, overlæge, dr.med.
Cody Bünger
Ortopædkirurgisk afdeling E
Aarhus Sygehus, Nørrebrogade 44,
8000 Århus C.
E-mail: cbung@as.aaa.dk

Kasserer

Overlæge ph.d.
Bo Sanderhoff Olsen
Ortopædkirurgisk afdeling T
Amtsytgehuset i Herlev, Herlev Ringvej
2730 Herlev
E-mail: bosolsen@jubii.dk

Redaktør

Afdelingslæge
Michael Nielsen
Ortopædkirurgisk afdeling
Roskilde Amtssygehus Køge
Lykkebækvej 1
4600 Køge
E-mail: cykellaegenielsen@dadlnet.dk

Sekretær

Overlæge, dr.med. Bjarne Møller-Madsen
Ortopædkirurgisk afdeling E
Århus Kommunehospital
Nørrebrogade 44
8000 Århus C
Tlf. 89 49 41 08
E-mail: bmmad@as.aaa.dk

Betingelser for optagelse i DOS

Alle læger med dansk autorisation kan optages i Dansk Ortopædisk Selskab. Anmodning om indmeldelse skal ske skriftligt eller via DOS's hjemmeside www.ortopaedi.dk, anmodningen skal stiles til bestyrelsen og indsendes sammen med oplysninger om personlige data til sekretæren Bjarne Møller-Madsen.

DOS-Bulletin

Udgiver

Dansk Ortopædisk Selskab

Ansvarshavende redaktør

Michael Nielsen

Web-page

www.ortopaedi.dk

Redaktion og annoncer

c/o Annette van Hauen
HovedOrtoCentret, 2-10-1
Rigshospitalet
Blegdamsvej 9
2100 København Ø
e-mail: avh@rh.dk

DTP & Tryk

Kandrup Bogtryk
Århusgade 88, 2100 København Ø
Tlf. 3543 6000 · Fax 3543 6008
tryk@kandrup.dk · www.kandrup.dk

ISSN 0902-8633

DEADLINES FOR NÆSTE BULLETIN

ANNONCER: Fredag den 18. november 2005

TEKST: Fredag den 2. december 2005



Møder i forbindelse med Årsmødet

Radisson SAS Scandinavia Hotel, København

Torsdag d. 27.10.05

DOT: Dansk Ortopædisk Traumeselskab	09:00 - 11:00
SAKS: Dansk Selskab for Artroskopisk Kirurgi og Sportstraumatologi	09:30 - 12:00
Ryginteressegruppen	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	10:30 - 12:00
Dansk Korsbåndsregistreringgruppe	12:00 - 14:30

Andre Faggruppemøder omkring DOS mødet:

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

Se evt. program sidst i bladet.

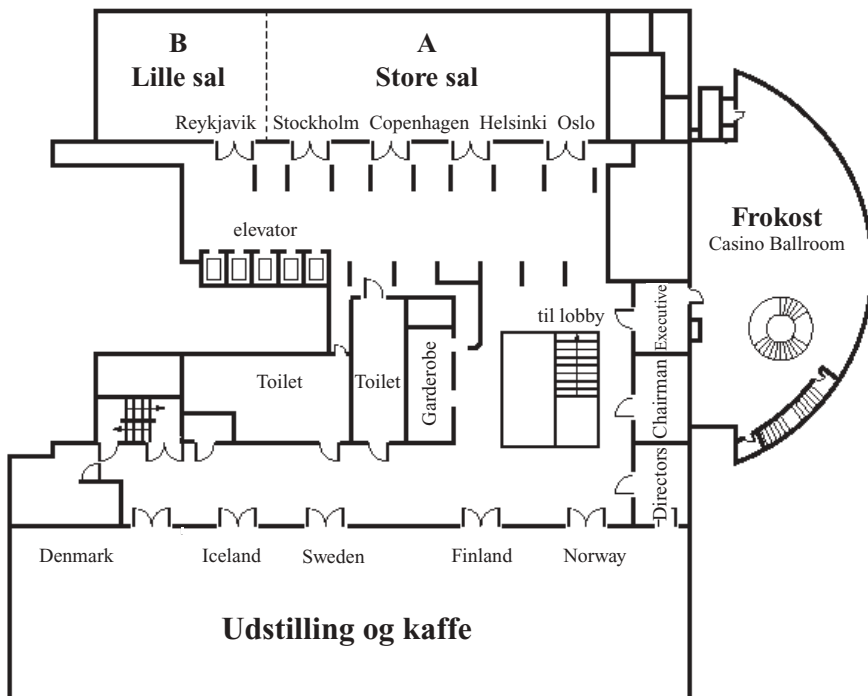
Sort-Hvid annonce kommer ind her

Dansk Ortopædisk Selskabs Årsmøde

27. - 28. oktober 2005

Radisson SAS Scandinavia Hotel, København

Oversigtsplan



Mødeoversigt

Torsdag d. 27. oktober

Room A	Room B
13:00 - 14:30 Rygkirurgi (Foredrag)	13:00 - 13:50 Referenceprogram om primær hoftealloplastik (Høring) 13:55 - 14:40 Referenceprogram "Behandling af Scaphoideum frakturer" (Høring)
14:30 - 15:30 Udstilling og Kaffe	
15:30 - 17:00 Guildal Memorial Symposium Uddrag af Dansk Ortopædis historie <i>Moderator: Steen B. Christensen</i>	
17:00 - 17:30 Guildal uddelinger	
19:00 Gallafest	

**Indtegning på bordplan til middagen
slutter torsdag kl. 15:30!!!**

Påklædning: Smoking eller mørk tøj.

**Der fremsendes billetter til frokosterne,
men ikke til middagen.**

Frokostbilletterne skal afleveres til betjeningen.

Mødeoversigt

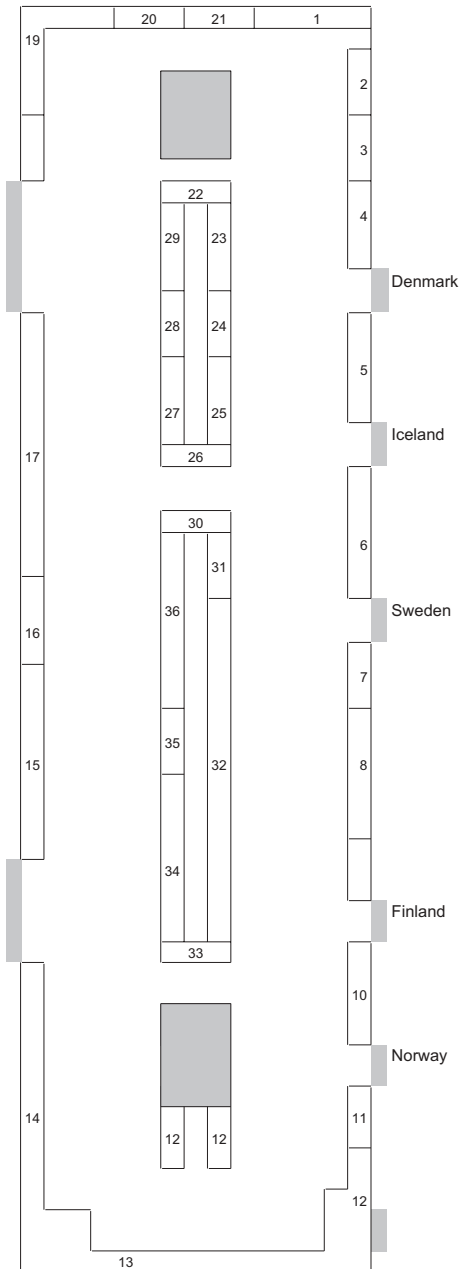
Fredag d. 28. oktober

Room A	Room B
09:00 - 10:00 Foredragskonkurrence (Foredrag)	
10:00 - 11:00 Udstilling og Kaffe	
11:00 - 12:30 Børneortopædi og OE (Foredrag)	11:00 - 12:30 Traumatologi (Foredrag)
12:30 - 13:30 Lunch	
13:30 - 15:00 Alloplastikkirurgi (Foredrag)	13:30 - 15:00 Poster Session (Posters)
15:00 - 15:30 Udstilling og Kaffe	
15:30 - 17:00 Symposium: "The Impact of Scandinavian Hip Arthroplasty Registers to the Improvement of Total Joint Replacement" Dansk Hoftalloplastik Registers 10 års jubilæum 17:00 Uddelinger: DOS fonden Bedste foredrag og bedste poster	

Udstillere

<i>Udstiller</i>	<i>Stand nr.</i>	<i>Areal</i>
Aim-Max Medical	24	1 x 3 m
Aircast Scandinavia AB	3	1 x 3 m
Apgar Danmark A/S	22	1 x 3 m
Biomet Danmark ApS	17	1 x 12 m
B. Braun / Aesculap	16	1 x 4 m
ConvaTec	2	1 x 3 m
dj Orthopedics Nordic ApS	33	1 x 3 m
Fischer Medical	4	1 x 4 m
GlaxoSmithKline	1	1 x 5 m
Group sanofi-aventis	18	1 x 3 m
Hemax Medical ApS	26	1 x 3 m
Implantec Medical ApS	10	1 x 5 m
Karl Storz Endoskopi Danmark A/S	30	1 x 3 m
KEBO MED A/S	27	1 x 4 m
LJ Medical	5	1 x 5 m
MEDA A/S	25	1 x 4 m
Medtronic Danmark A/S	6	1 x 6 m
Merck Sharp & Dohme	9	1 x 3 m
Nordic Medical Supply OP	12	1 x 17 m
Nordic Medical Supply ORTO	14	1 x 20 m
Nordic Medical Supply ENDO	13	1 x 10 m
Norpharma A/S	28	1 x 3 m
Ortotech	8	1 x 6 m
Osmedic ApS	23	1 x 4 m
Ossano Scandinavia ApS	20	1 x 3 m
Pro-Meduc	7	1 x 3 m
Protesekompagniet	32	1 x 16 m
Regent Medical	21	1 x 3 m
Scandinavian Customized Prosthesis as	35	1 x 3 m
Sectra A/S	11	1 x 3 m
Smith & Nephew A/S	36	1 x 8 m
Sports Pharma OrtoSupport ApS	31	1 x 3 m
Stryker Danmark	15	1 x 9 m
Swemac Orthopaedics AB	19	1 x 8 m
Synthes A/S	34	1 x 8 m
Viking Medical Scandinavia ApS	29	1 x 4 m

Udstilling



DOS ÅRSMØDET 2005



Program
DOS Årsmøde 2005

Torsdag 27. oktober

13:00 - 14:30 Sal A

Ryggkirurgi

Chairman: Michael Nielsen

Side

Blood loss in relation to lumbar spinal fusion	29
<i>Finn B. Christensen, Per Buchholtz, Thomas Andersen, Ebbe S. Hansen, Kristian Høy, Peter Helmig, Bent Niedermann, Cody Bünger</i>	
Short term complications following lumbar artificial disc surgery	30
<i>Michael Brix, Ralph Berg, Henrik Grønvall</i>	
The outcome after surgical treatment of pyogenic spinal infection	31
<i>Maria Lyck Hansen, Tine Nymark, Mikkel Ø. Andersen, Karsten Thomsen</i>	
Less than optimal indication for fusion surgery increases risk of inferior outcome	32
<i>T. Andersen, F. B. Christensen, P. Helmig, K. Høy, B. Niedermann, E. S. Hansen, C. Bünger</i>	
Short term results of minimal invasive anterior scoliosis surgery with Eclipse 2 compared to traditional posterior pedicle screw instrumentation – a case control study	33
<i>Søren Eiskjær, Jon Kaspersen og Sten Rasmussen</i>	

Torsdag 27. oktober

13:00 - 14:30 Sal A:

Rygkirurgi (cont.)

Chairman: Michael Nielsen

Side

Estimation of life expectancy in spinal extradural metastasis

34

Anders Greis, Kristian Høy, Ebbe Stender Hansen, Peter Helmig, Bent Niedermann, FB Christensen, & Cody Bünger

Prospective study of broad range PCR as a supplement to conventional culture for the detection of bacterial pathogenes in samples from patients with a clinically suspected diagnosis of spinal infection

35

B. E. Lindblad, L. N. Pedersen, K. Fuursted, M. Arpi, E.S. Hansen, K. Høy, P. Helmig & C. Bünger

Using MR imaging to identify fusion and pseudarthrodesis of porous tantalum interbody fusion devices in a pig spinal fusion model

36

Xuenong Zou, Haisheng Li; Gang Chen, Michael Bendtsen, Hans Stodkilde-Jørgensen, Martin Lind, Cody Bünger

Spinal Mouse®

37

Ingrid Eitzen, Stig Sonne-Holm, Niels Ellitsgaard, Jesper Bencke

Torsdag 27. oktober

13:00 - 13:50 Sal B

**Høring
Referenceprogram for
Total Hoftealloplastik**

Dansk Selskab for Hofte- og Knæalloplastik fremlægger ovenstående udkast til høring den 27. oktober 2005 i forbindelse med DOS-mødet i København.

Udkastet kan ses på selskabet hjemmeside (www.dshk.org under Referenceprogrammer) efter den 8. oktober 2005. Høringen er begrænset til 50 minutter – så Styregruppen har derfor valgt at fremlægge relevante anbefalinger fra relevante kapitler til diskussion – og håber at selskabets medlemmer efter gennemlæsning af udkast til programmet fremkommer med yderligere spørgsmål og kommentarer.

Alle kapitelformændene forventes at være til stede i salen under høringen.

Må vi opfordre jer til at fremsende betydende kommentarer eller spørgsmål til Styregruppen senest den 23. oktober 2005 på mail (pka@dadlnet.dk) således vi kan forberede os grundigt på svarene.

*På vegne af Styregruppen
Per Kjærsgaard-Andersen*

Torsdag 27. oktober

13:55 - 14:40 SAL B

**Høring:
Dansk Selskab for Håndkirurgi:**

Referenceprogrammet:

**"Behandling af
Scaphoideum frakturer"**

Gå ind på håndkirurgernes hjemmeside:

<http://www.dsfh.suite.dk/Referenceprogrammer.htm>

Læs forslaget til referenceprogrammet og mød op til høringen med ros og eventuel kritik eller forslag til forbedringer.

Høringen for både hoftealloplastik og scaphoideumfrakturer fortsætter på nettet efter DOS-mødet.

Man vil frem til en gang midt på foråret kunne stille ændringsforslag til både anbefalinger og formuleringer i programmerne.

Det forventes at begge referenceprogrammer vil blive godkendt på generalforsamlingen ved Forårsmødet 2006.

Torsdag 27. oktober

15:30 - 17:00 Sal A

***Guildal Memorial Symposium
Uddrag af Dansk Ortopædis historie***

Moderator: Steen Bach Christensen

Inge Reimann:	Fra kirurgiens start i Danmark
Niels Stephensen:	Hans Knudsen
Espen Berntsen:	Åbningen af de ortopædiske hospitaler og lægeansættelsen
Bent Ebskov:	Tre gamle chefer
Jørgen Lauritzen:	Nordisk Ortopædisk Forening
Kaj Harry Sørensen:	Ortopæder og kirurger
Otto Sneppen:	Forskning og subspecialisering set i historisk perspektiv

17:00 – 17:30 Sal: A

Uddelinger fra Guildal Fonden

19:00 - ???

Galla fest

Fredag 28. oktober

09:00 - 10:00 Sal A

Foredragskonkurrencen

Chairmen: Jes Bruun Lauritzen, Ole Ovesen	Side
Costs and outcomes in lumbar spinal fusion <i>Rikke Søgaard, Finn Bjarke Christensen, Terkel Christiansen, Cody Bünger</i>	38
Chronic pain following total hip arthroplasty: A nationwide questionnaire study <i>Lone Nikolajsen, Birgitte Brandsborg, Ulf Lucht, Troels S Jensen, Henrik Kehlet</i>	39
Long-term functional outcome of circumferential fusion vs. posterolateral fusion with instrumentation a randomized clinical study with 5-9 years follow-up <i>Tina S. Videbæk, Finn B. Christensen, Rikke Søgaard, Ebbe S. Hansen, Kristian Høy, Peter Helmig, Bent Niedermann, Søren Eiskjær, Cody Bünger</i>	40

Fredag 28. oktober

09:00 - 10:00 Sal A

Foredragskonkurrencen (cont.)

Chairmen: Jes Bruun Lauritzen, Ole Ovesen Side

Variation in use of blood transfusions among patients undergoing total hip arthroplasty at Danish hospitals 41

*Alma B. Pedersen, Anders Riis, Ulf Lucht,
Jan Jørgensen Søren P. Johnsen*

Measuring fragment 1.2 in spot urine to detect hypercoagulability in hip arthroplasty patients 42

*Camilla Ryge, Michael R Lassen, Lars C Borris,
Morten Breindahl*

Colloss® E with Ossaplast® artificial bone graft is comparable to allograft in terms of implant fixation 43

*Jørgen Baas, Brian Elmengaard, Joan Bechtold,
Xinqian Chen, Kjeld Søballe*

Fredag 28. oktober

11:00 - 12:30 Room A

Overekstremitet og Børneortopædi

Chairman: Gert Rahbek Andersen	Side
Outcome after treatment for displaced humeral head fractures with a cemented Neer 2 hemiarthroplasty <i>Bettina Falborg, Henrik Palm, Anne-Marie Fenger, Kiran Anderson, Claus Hjorth Jensen</i>	44
The GSB III elbow prosthesis in rheumatoid arthritis, a 2 to 14 years follow-up on 36 consecutive implants <i>Hjorth Jensen C, Jacobsen S, Sonne-Holm S</i>	45
A retrospective study of 32 patients treated with the PHILOS plate <i>Henrik Friis Juhl, Martin Risom, Peder Burggaard, Henrik Grønborg</i>	46
Radiofrequency microdebridement in treating chronic lateral epicondylitis <i>Marc Strauss og Søren Kjeldsen</i>	47
Upper extremity surgery in cerebral palsy <i>Claus Hjorth Jensen, Vibeke Forchhammer, Margit Henriksen & Søren Anker Pedersen</i>	48

Fredag 28. oktober

11:00 - 12:30 SAL A

Overekstremitet og Børneortopædi (cont.)

Chairman: Gert Rahbek Andersen	Side
CT scan in glenohumeral deformity secondary to obstrical brachial plexus palsy <i>Margit Andreassen, Trine Torfing, Kurt Simesen Lars Henrik Frich</i>	49
Management of contracture of the gleno-humeral joint after obstetrical brachial plexus palsy An early report on arthroscopic techniques. <i>Lars Henrik Frich, Kurt Simesen & Susanne Jepsen</i>	50
Rainbow traction in treatment of developmental and non-developmental dislocation of the hip <i>Adam Hede, Steen Bach Christensen Hans Henrik Strange-Vognsen</i>	51

Fredag 28. oktober

11:00 - 12:30 SAL B

Traumatologi

Chairman: Søren W. Rasmussen

Side

- Rasch and factor analysis of the Danish Knee injury and Osteoarthritis Outcome Score (KOOS)** 52
Jonathan Comins, John Brodersen, Michael Krogsgaard, Nina Beyer
- ACL-reconstruction with tractus ileotibialis: A retrospective study of 234 ACL-reconstructions** 53
Albrecht-Olsen P, Hartkopp A, Nicolaisen T, Chrintz H, Aagaard H, Have Dall C
- Iliotibial band ACL reconstruction – a systematic one-year follow-up** 54
Henrik Aagaard, Henrik Chrintz, Tom Nicolaisen, Peter Albrecht-Olsen, Andreas Hartkopp
- Equal tension in all four strands of a semitendinosus graft with a low profile tibial fixation device (Cobra LFD, registered trademark)** 55
Lene Meldgaard, Søren Winge, Preben Duun, B.K.O Engström
- Correlation between bone bruise and pain in patients with injury of the anterior cruciate ligament** 56
Torsten Warming, Kirsten Neergaard, Michael Krogsgaard

Fredag 28. oktober

11:00 - 12:30 SAL B

Traumatologi (cont.)

Chairman: Søren W. Rasmussen

Side

**Dislocation of hemiarthroplasties of the hip
with Vario-Cup** 57

*Abida S. Petersen, Frank Damborg, Lars Schjøtz,
Niels J. Olsen*

**The role of surgeon's experience and supervision
on reoperation after hip fracture surgery** 58

*Henrik Palm, Steffen Jacobsen, Michael Krasheninnikoff,
Nicolai B. Foss, Henrik Kehlet, Peter Gebuhr*

**First hip fracture is followed by low frequency of
second hip fracture within a short time frame.
Intervention should have immediate effect** 59

*Tine Nymark, Jens M. Lauritsen, Ole Ovesen,
Bernard Jeune, Niels Dieter Röck*

**Prognostic factors for mortality and postoperative
medical complications after hip fracture surgery** 60

*Susanne Juhl Pedersen, Henrik L Jørgensen,
Jes Bruun Lauritzen, Benn Duus*

Fredag 28. oktober

13:30 - 15:00 SAL A

Alloplastikkirurgi

Chairman: Jens-Erik Varmarken

Side

Patient satisfaction after knee arthroplasty <i>Torben Sandberg Sørensen, Snorre Stephensen, Lars Møller</i>	61
Short term results on PFC Sigma Rotating Platform <i>Wisam Yussef, Upender Singh, Kim Engfred</i>	62
Dysfunction and general health status of patients over 65 years undergoing total hip-replacement <i>Britta Hørdam, Kjeld Søballe, Svend Sabroe</i>	63
Cost analysis of minimally invasive surgery compared to standard primary total hip replacement <i>Søren Overgaard, Rikke Juul Larsen, Ole Ovesen</i>	64
14 years results 593 total hip replacements Harris/Galante cup combined with the Spotorno c/s cementless stem, or Müller straight stem <i>Kim Engfred, Upender Singh, Vivian Petersen, Tom Lemser, Steen Mejdahl</i>	65

Fredag 28. oktober

13:30 - 15:00 SAL A

Alloplastikkirurgi (cont.)

Chairman: Jens-Erik Varmarken

Side

Acetabular migration after Ganz osteotomy examined by radiostereometric analysis <i>Inger Mechlenburg, Søren Kold, Lone Rømer, Kjeld Søballe</i>	66
The use of constrained liners for prevention of dislocation in total hip arthroplasty <i>Roland Knudsen, Ole Ovesen, Per Kjærsgaard-Andersen, Søren Overgaard</i>	67
Bone mineral measurements along THA and TKA. The significance of improved software <i>P. Martin Gehrchen & Michael Mørk Petersen</i>	68
Fixation of hydroxyapatite coated revision implants is improved by cracking the sclerotic bone rim <i>Elmengaard, Brian, Bechtold, Joan E, Chen, Xinqian, Kjeld Søballe</i>	69

Fredag 28. oktober

13:30 - 14:30 Room A

Poster session

**Chairmen: Cody Bünger,
Per Hölmich, Michael Krogsgaard**

Side

- Sequential medial ligament release a.m. Matsueda.
An in vitro study under use of a navigation system** 70
*Carsten Perlick, Lars Perlick, Holger Bähis,
Tobias Hüfner, Christian Lüring*
- Alteration of hip joint centre during acetabular
reaming** 71
*Thomas Baad-Hansen, Walther Fledelius,
Søren Kold, Poul Torben Nielsen, Kjeld Søballe*
- The use of strong analgesics after implementing
a standardized regime for the treatment of
postoperative pain following THA-surgery** 72
Anders Troelsen, Jens Nicolaysen, Marianne Breddam
- STPI prosthesis – A solution for the treatment of
STT joint osteoarthritis** 73
Nina Vendel Jensen, Dorte Stumpe, Niels H.Søe Nielsen
- The severity and extent of residual symptoms at
one-year follow-up after commotio cerebri (CC)** 74
*Mikkel Mylius Rasmussen, Dorte Aarup Clemmensen,
Steffen S. Jensen*

Fredag 28. oktober

13:30 - 14:30 SAL: A

Poster session (cont.)

Chairmen: Cody Bünger,
Per Hölmich, Michael Krogsgaard

Side

**Systematic review: agreement among doctors
classifying proximal humeral fractures according
to the Neer system**

75

Stig Brorson and Asbjørn Hróbjartsson

**In-Hospital hip fractures prevalence, risk
factors and outcome**

76

Henrik Palm, Nicolai Bang Foss, Henrik Kehlet

**Characterization of adeno associated viral
transduction of adult human mesenchymal
stem cells**

77

*Stefan Stender, Mary Murphy, Carsten Stengaard,
Michael Ulrich-Vinther, Kjeld Søballe, Frank Barry*

**Experimental porcine model of intervertebral
disc degeneration**

78

*Michael Bendtsen, Tina Mygind, Li Haisheng, Zou
Xuenong, Hans Stødkilde Jørgensen, Cody Bünger*

**The effect of hyaluronan on osteogenesis of
porcine bone marrow stromal cells in vitro**

79

*Lijin Zou, Xuenong Zou, Haisheng Li, Tina Mygind,
Cody Bünger*

Fredag 28. oktober

13:30 - 14:30SAL: A

Poster session (Cont.)

Chairmen: Cody Bünger,
Per Hölmich, Michael Krogsgaard

Side

**Optimizing viral and non-viral gene transfer
methods for genetic modification of
mesenchymal stem cells**

80

*Maik Stiehler, Mogens Duch, Tina Mygind, Haisheng Li
Michael Ulrich-Vinther, Charlotte Modin, Martin Lind,
Finn S. Pedersen, Cody Bünger*

Cobb angle measurement by Ortelius 800

81

Andreas Kappel og Søren Eiskjær

**CT-Fluoro merge using Vectorvision and
Stealth Station compared to fluoroscopy for
insertion of pedicle screws using MIS techniques**

82

*Carsten Perlick, Sandie Nielsen, Sten Rasmussen,
Jon Kaspersen, Søren Eiskjær*

Fredag 28. oktober

15:30 - 17:00 Sal A:

Dansk Hoftealloplastik Registers
10-års jubilæums symposium

"The Impact of Scandinavian Hip Arthroplasty Registers to the Improvement of Total Joint Replacement"

Moderator: Per Kjærsgaard-Andersen, Chairman, DSHK

- 15:30-15:55 Results from the Norwegian Hip Arthroplasty Register
Leif Havelin, Bergen, Norway
- 16:55-16:20 Results from the Danish Hip Arthroplasty Register
Ulf Lucht, Aarhus, Denmark
- 16:20-17:00 Panel Discussion

17:00 - 17:30 Sal A

Uddelinger:

DOS- Fonden
Bedste Foredrag
Bedste Poster

Abstracts

Blood loss in relation to lumbar spinal fusion

Finn B. Christensen, Per Buchholtz, Thomas Andersen, Ebbe S. Hansen, Kristian Høy, Peter Helmig, Bent Niedermann, Cody Bünger
Spine Section, Orthopaedic Dep., Aarhus Hospital

INTRODUCTION: Blood loss in spinal surgery is not sufficiently investigated in comparison to hip- or knee surgery. The aim of this study is to investigate blood loss in relation to different lumbar spinal fusion procedures.

MATERIALS AND METHODS: A retrospective chart study of 463 consecutive patients all undergoing lumbar spinal fusion from 1997 to 2004. The patients had circumferential fusion or posteriorlateral fusion with or without instrumentation.

RESULTS: 463 patients (288 female) with an average blood loss during operation of 855ml(100-5240). Average duration of operation was 276min. Mean blood loss post op. was 290ml (0-1850). 31% of all patients received allo-transfusions during or after surgery. 59% received auto transfusion using cell-saver (mean 388 ml). We found significant difference between type of surgical procedure (non-instrumented fusion (mean 722ml), instrumented fusion (mean 892ml), and 360deg. fusion (mean 890ml)) ($p=0.05$). Smokers had significant higher preoperative haemoglobin ($p=0.02$) and a significant lower per-operative blood loss ($p=0.02$) compared to non-smokers. Males had a significant greater blood loss ($p=0.0001$). There was a positive correlation between duration of surgery and blood loss ($R=0.5$, $p=0.01$) and a negative correlation between age and duration of surgery ($p=0.01$). Peroperative blood loss increased by number of fusion levels ($p=0.01$).

DISCUSSION: Blood loss in relation to spinal fusion is clearly important and influenced by several factors. It has to be taken into account when choosing operative strategy. Further investigation will show if blood loss during fusion surgery affects outcome.

Short term complications following lumbar artificial disc surgery

Michael Brix, Ralph Berg, Henrik Grønvall

Spine unit, Dept. of orthopaedic surgery. Aabenraa Hospital

INTRODUCTION: Lumbar Artificial Disc surgery is a relatively new method of treating Degenerative Disc Disease (DDD) in Denmark. The aim of this study was to evaluate short term Complications following this surgical procedure

MATERIAL AND METHODS: From December 2001 to July 2005 44 prostheses were implanted in 40 patients. Preoperatively the patients underwent a clinical examination as well as x-rays and MRI.

The Prodisc® prosthesis was used and the operated levels were from L3 to L5. Postoperative follow-ups are performed after 6 weeks, and 3,6,12 and 24 months. Complications such as nerve injury, vascular damage, infections and subsidence are consecutively registered.

RESULTS: Mean follow up time: 16 months (3-44).

Two (4,5%) early complications were encountered: both were cases of subsidence causing resisting back pain.

Salvage surgery was performed with posterolateral fusion with pedicle screws and bone grafting, and the prosthesis left in-situ in both cases, with good clinical results.

There were no infections and no nerve or vascular complications.

CONCLUSION: In the short term follow up Lumbar Artificial Disc surgery, seems to be a safe procedure with few complications and in cases of subsidence salvage surgery is possible.

Future studies should reveal midterm and long-term complications.

The incidence of complications is comparable to the literature.

The Outcome after Surgical Treatment of Pyogenic Spinal Infection

*Maria Lyck Hansen, Tine Nymark, Mikkel Ø. Andersen,
and Karsten Thomsen*

Spine Section. Dept. of Orthopaedics OUH

INTRODUCTION: Pyogenic spinal infections (PSI) are accounting for less than 10% of all osteomyelitis. Most patients are treated non-operatively by antibiotics and only severe cases require operative debridement and stabilisation. The aim of this study is to evaluate the outcome of patients treated surgically for a PSI.

METHODS: In 2001/2002 30 patients underwent surgical treatment for PSI at the above department. In 2005 the outcome was assessed. 9 patients died (mean 98 range 11-240 days postop.) and 2 were excluded (1 was not interested in joining and 1 we were not able to locate). The outcome in the group of 19 patients was assessed in the outpatient clinic or in the patients' homes using the EuroQol score, the Barthel index, SF-36, MMSE, and three functional tests. The mean age in the group was 66.5 years (47-81 yrs) and male:female ratio was 10:9.

RESULTS: Changes in EuroQol score and Barthel index when comparing pre- and postoperative scores was non-significant. Results of SF-36 at follow up were significantly lower than age-matched controls, except for the categories: General Health (GH) and Mental Health (MH), which was non-significant. The use of appliances to assist walking was 47% at follow-up compared to 21% pre-op. MMSE score was mean 26.6 at follow-up. Concerning the functional testing the Tandem-test was mean 21, Timed up & go mean 14.4 sec, and repeated rising from chair in 30 sec mean 8.4 times with 1 out of 3 using the help of arms.

CONCLUSION: One in three patients had died at three year postop. as a combination of the PSI, and the often high level of co-morbidity in this group of patients. The view of personal health was significantly lower than controls apart from GH and MH. Barthel and EuroQol scores had not been changed significantly by the operation.

Less than optimal indication for fusion surgery increases risk of inferior outcome

*T. Andersen, F. B. Christensen, P. Helmig, K. Høy, B. Niedermann,
E. S. Hansen, C. Bünger*

Spine section, Orthopaedic Dept E, University Hospital of Aarhus
Ortopædkirurgisk Forskningslaboratorium

INTRODUCTION: Few have investigated the importance of the degree of surgical indication for spinal fusion in relation to functional outcome. Aim: To investigate the importance of degree of surgical indication in relation to outcome.

METHODS: 77 patients undergoing spinal fusion were extensively investigated with relation to predictive factors prior to operation. As part of the initial examination the surgeon had to categorize the indication for surgery as optimal or acceptable. Follow-up included Dallas Pain Questionnaire, a NRS for back and leg pain and a question regarding satisfaction. Patients were followed for at least one year.

RESULTS: Optimal indication was achieved in 49 patients (64%), acceptable in 28 patients (36%). Patients with acceptable indication were older ($p=0.0016$), were more likely to have had previous surgery ($p=0.060$) or to have a legal/insurance/compensation case running ($p=0.028$). They were more likely to smoke 10 cigarettes or more daily ($p=0.053$). There were no differences between the two groups prior to operation with regards to average leg and back pain and three out of four of the categories in the DPQ.

The optimal group had significant better outcome with regards to the daily activities and work-leisure activities categories in the DPQ ($p=0.0121/p=0.0230$). They had significantly less back pain ($p=0.0319$), had less leg pain ($p=0.15$) and had a higher global satisfaction score ($p=0.063$).

DISCUSSION: Patients with less than optimal indication for fusion surgery have increased risk of inferior outcome 1 year after surgery. Therefore, both patient and surgeon should give surgery a second thought if the indication is not optimal.

Short term results of minimal invasive anterior scoliosis surgery with Eclipse 2 compared to traditional posterior pedicle screw instrumentation – a case control study

Søren Eiskjær, Jon Kaspersen og Sten Rasmussen

Dept. of Orthopedics, The Spinal Unit, Aalborg University Hospital

INTRODUCTION: The disadvantages of the posterior approach in scoliosis surgery are the extensive approach and muscle damage. In contrast the anterior approach is well suited for minimal invasive surgery. This case control study compares the results after minimal access anterior scoliosis surgery with Eclipse 2 to the results of posterior pedicle screw instrumentation.

PATIENTS AND METHODS: The Eclipse 2 system was used in 8 patients with idiopathic scoliosis, minimum follow up time 6 months. 7 females and 1 male. The patients were 13-18 years of age. Preoperative Cobb angles measured 40°-70°. The Eclipse 2 system is a double rod system with 2-headed cannulated screws. The skin incision over the apex of the curve and 2 mini-thoracotomies are performed. Synframe was used for retraction. Instrumentation is video- and fluoroscopy assisted. Segmental compression is used to correct the curve. 8 age, sex and Cobb angled matched controls were chosen from our scoliosis database. These 8 patients had a minimum 2 year follow up time and had all undergone pedicle screw instrumentation (Horizon). Duration of surgery, preop. bleeding, days in hospital, curve reduction, complications and SRS scores were compared.

RESULTS: There were no complications in the 2 groups. Average per cent curve reduction in the Eclipse 2 group was 85% compared to 71% in the Horizon group. Preoperative bleeding was significantly less for the Eclipse 2 group. Duration of surgery was significantly longer in the Eclipse 2 group. The Eclipse 2 group could be discharged from hospital 1-2 days before the Horizon group.

CONCLUSIONS: Eclipse 2 probably at least as effective as pedicle screws for curve correction. The patients in the Eclipse 2 group were discharged sooner.

Estimation of life expectancy in spinal extradural metastasis

Anders Greis, Kristian Høy, Ebbe Stender Hansen, Peter Helmig, Bent Niedermann, FB Christensen, & Cody Büniger

Spine Section. Dept of Orthopedics,
University Hospital of Aarhus, Denmark

INTRODUCTION: Life expectancy is a significant determinant in the selection of surgical procedure in the treatment of spinal metastases. The aim of the present prospective study of 169 patients with extra-dural osseous metastases was to determine the usefulness of the Tomita and the Tokuhashi scores to predict survival.

METHODS: Patients treated in the Spine Unit, Aarhus University Hospital from the 11th of January 2001 to the 28th of April 2004 were included in the study. All patients were scored both after the “simple” Tomita and the more comprehensive Tokuhashi score and analysed in three comparative time groups using Receiver Operating Characteristic curves (ROC curves) to see which score was the most precise in estimating: “Dead before 3 month”, “Dead before 6 month” and “Dead before 12 month”. Significant difference is seen when P-values < .05.

RESULTS: In the analysis “Dead before 3 month” the area under the curve are .69 for Tomita and .76 for Tokuhashi with no significant difference (P = .16). In the analysis “Dead before 6 month” the area under the curve are .74 for Tomita and .71 for Tokuhashi with no significant difference (P = .47). In the analysis “Dead before 12 month” the area under the curve are .72 for Tomita and .69 for Tokuhashi with no significant (P = .38). . A Kaplan-Meier sub-study shows that the Tomita score overestimates the prognosis in scores from 4 to 7 and that the Tokuhashi score underestimates the prognosis in scores from 0 to 8

CONCLUSIONS: The Tomita and Tokuhashi preoperative scores are both successful as prognostic tools. The early death prognosis is most important in avoidance of major surgery and is estimated best by the Tokuhashi Score.

Prospective Study of Broad Range PCR as a Supplement to Conventional Culture for the Detection of Bacterial Pathogens in Samples from Patients with a Clinically Suspected Diagnose of Spinal Infection

B. E. Lindblad, L. N. Pedersen, K. Fuursted, M. Arpi, E.S. Hansen, K. Høy, P. Helmig & C. Bünger

Department of Orthopedic Surgery and Department of Clinical Microbiology, Aarhus University Hospital and Department of Clinical Microbiology, Herlev Hospital

THE FIRM DIAGNOSIS of bacterial infections in the spine rely traditionally on the culture of the infecting microorganism. This can be difficult if patients receive antibiotic treatment before samples for culture are collected, or in case of fastidious or non-culturable microorganisms. This impairs the recovery of the microorganism, and complicates a directed antibiotic therapy which leads most clinicians to adopt a conservative antimicrobial approach. We here describe the first prospective study of the use of broad range PCR in spinal infections as a supplement to conventional culture. All patients admitted to Aarhus University Hospital between August 2002 and September 2003 with clinically suspected diagnose of infection in the spine were included. Methods: Conventional culture and broad range PCR for 16S rRNA genes to identify bacterial DNA.

RESULTS: Thirty eight patients were included in the study: Eighteen patients were categorized as having a spine infection and twenty patients were categorized as having a non-infectious disease. Conventional culture provided a microbiologic diagnose in 8/18 patients (44%) with a spine infection, compared to 9/18 patients (50%) by broad range PCR. By combining the two methods a microbiologic diagnosis could be found in 12/18 (67%) cases. The contamination rate was for culture 5.6% (1/18), and for PCR 0%.

CONCLUSIONS: Either method alone lacks sensitivity. If the conventional culture method was supplemented with Broad range PCR, a microbiologic diagnosis could be placed in an additional 4/18 (22%) cases. The microorganisms found in PCR only were fastidious species. Broad range PCR is a valuable supplement to the conventional methods in the diagnosis of infections in the spine.

Using MR imaging to identify fusion and pseudarthrosis of porous tantalum interbody fusion devices in a pig spinal fusion model

**Xuenong Zou, *Haisheng Li; §Gang Chen; *Michael Bendtsen,; §Hans Stodkilde-Jørgensen; *Martin Lind, *Cody Bünger*
**Orthopaedic Research Lab, Department of Orthopaedics E/
§MR Re-search Center, Aarhus University Hospital*

INTRODUCTION: Porous tantalum trabecular metal has been used successfully as an anterior cervical interbody fusion device as well as implants in a variety of spinal fusion animal studies. However, it is difficult to evaluate the fusion status in clinical situation. The aim of the present study was to evaluate the feasibility of using the in vivo MR imaging to identify fusion and pseudarthrosis of fusion devices on a pig spinal fusion model.

MATERIAL AND METHODS: 12 pigs underwent an anterior lumbar interbody fusion of L2/3, L4/5 and L6-7. L2/3 level was implanted using a solid device with pedicle screw fixation; while the other two levels were inserted with a hollow device packed with autograft, which secured with two titanium staples in front of implant. Six months later, T1 and T2-weighted MR imaging were obtained with spin-echo sequences. After sacrifice, X-ray films and histology were done.

RESULTS: A high signal intensity band between the vertebral bone and implant on T1 and T2-weighted MR images could be detected with signal intensity as 382.20 ± 24.75 and 388.23 ± 20.13 ; whereas normal MR signal-intensity on T1 and T2-weighted MR images was calculated as 167.97 ± 7.71 and 195.86 ± 7.83 ($p < 0.001$). Compared T1, T2-weighted MR images or X-ray films with histological findings, T1-weighted images showed clinically acceptable sensitivity and specificity (69.6% and 90.7%); however, there was no acceptable sensitivity and specificity on T2-weighted images (56.6% and 95.3%) and X-ray films (52.2% and 97.7%).

CONCLUSION: The results show that MR imaging can be available to identify fusion and pseudarthrosis of porous tantalum interbody fusion devices. A high signal intensity band between the vertebral bone and implant on T1-weighted images is an indicator of pseudarthrosis.

Spinal Mouse®

Ingrid Eitzen, Stig Sonne-Holm, Niels Ellitsgaard, Jesper Bencke
Gait analysis laboratory, orthopedic department, Hvidovre Hospital

AIM AND BACKGROUND: Repeated x-ray examinations of the spine in young women increase the risk for the development of cancer mammae. The aim of the present project was to evaluate the reproducibility of a newly developed non-invasive, radiation-free diagnostic tool intended for use within the orthopaedic area. Two studies concerning the reproducibility and validity of the device have been published, both establishing satisfactory results for measurements in the sagittal plane. However, no studies have been done to examine whether SM also is suitable for examination and follow-up of abnormalities in the frontal plane in the form of idiopathic scoliosis.

METHODS: 11 patients (age 9-18 years) with manifested idiopathic scoliosis were examined with X-ray and SM on the same day. X-rays were taken in standing position on one long plate. After that, two examiners performed measurements with SM. A third examiner then calculated Cobbs angle, first following the traditional procedure from x-rays, and thereafter, blinded from these results, from the SM-measurements. The superior and inferior end of the scoliosis were decided from x-rays, to ensure that angle measurements were made from the same segments in both conditions.

Subject	Cobbs	SMI	SMII	RESULTS AND CONCLUSION:
1	26.0°	0°	0°	Measurements performed with SM in its present form cannot be used for examination or follow-up of idiopathic scoliosis. As shown in the table, there were unacceptable divergence, both between x-rays and SM measurements, and between examiner 1 and 2 using SM. Consequently, SM can at this point only be used for registration of sagittal curv
2	35.6°	15°	8°	
3	22.9°	7°	3°	
4	8.1°	16°	7°	
5	18.5°	6°	2°	
6	33.5°	8°	4°	
7	6.6°	5°	4°	
8	19.8°	6°	2°	
9	41.3°	19°	8°	
10	14.3	1	7	
11	41.0°	10°	9°	

Costs and outcomes in lumbar spinal fusion

Rikke Søgaard, Finn Bjarke Christensen,

Terkel Christiansen, Cody Bünger

Spine Unit, Orthopaedic Research Lab., Aarhus

INTRODUCTION. Cost-effectiveness is becoming the ultimate criteria for health service management of spine surgery and yet, scientific knowledge about cost-patterns and cost-effectiveness is limited. The aims of this study were to investigate the relationship between costs and effects at the patient-level.

MATERIALS AND METHODS. A cohort of 136 consecutive patients with chronic low back pain, who were surgically treated from 2001 through 2002, was followed until 2-years postoperatively. All patients had posteolateral fusion (PLF), PLF+instrumentation or PLF+instrumentation+anterior support. Analysis of costs was performed at the patient-level by means of Activity-Based-Costing. Clinical outcomes were measured by means of the Dallas Pain Questionnaire and the Low Back Pain Rating Scale. Regression models were used to reveal determinants for costs and effects and the incremental cost-effectiveness ratios.

RESULTS. The costs of PLF were estimated at DKK 88,285(95% CI 81,369;95,546), instrumented PLF at DKK 94,396(89,865;99,574) and circumferential fusion at DKK 120,759(111,981;133,738). Net-benefit was significantly affected by smoking, functional disability in psychosocial life areas, multi-level fusion and surgical technique. Surprisingly, no correlation was found between costs and effects and the probability of cost-effectiveness was found moderate.

CONCLUSION. This study reveals hitherto unknown information both about cost-patterns at the patient-level and determinants for cost-effectiveness. We recommend focusing further in determinants for cost-effectiveness for the identification of subgroups. It could be that patient characteristics, which are even modifiable for a relatively low cost, have greater influence at cost-effectiveness than the surgical technique itself.

Chronic pain following total hip arthroplasty: A nationwide questionnaire study

*Lone Nikolajsen, Birgitte Brandsborg, Ulf Lucht,
Troels S Jensen, Henrik Kehlet*

Dept. of Anesthesiology and Orthopedic Surgery, Århus University Hospital, Danish Pain Research Center, Århus University and Dept. of Surgical Pathology, Rigshospitalet, Copenhagen

INTRODUCTION: Chronic postoperative pain is a well-recognized problem after various types of surgery but little is known about chronic pain after orthopedic surgery. Since severe preoperative pain is the primary indication for total hip arthroplasty (THA), we wanted to examine the prevalence of chronic pain after THA in relation to preoperative pain and early postoperative pain.

MATERIAL AND METHODS: Patients were recruited from the Danish Hip Arthroplasty Registry(<http://dhr.dk>). A pain questionnaire was sent to 1.231 consecutive patients who underwent primary THA 12-18 months earlier.

RESULTS: Response rate was 93.6%. Two-hundred and ninety-four patients (28.1%) had chronic ipsilateral hip pain at the time of the interview and pain limited daily activity to a moderate to severe degree in 12.1%. The chronic pain state was related to the recalled intensity of early postoperative pain (95% CI: 20.4-33.4%) and pain complaints from other sites of the body (95% CI: 20.7-32.1%) but not to the preoperative intensity of pain. Patients with chronic pain more often reported dysesthesia in the incisional area (95% CI: 1.2-7.6%).

CONCLUSION: The results suggest that hyperexcitability and genetic and psychosocial factors are important for development of chronic post-THA pain. Future prospective studies should include a detailed assessment of preoperative, intraoperative and postoperative factors in order to clarify the relative pathogenic role of the factors.

Long-term functional outcome of circumferential fusion vs. posterolateral fusion with instrumentation a randomized clinical study with 5-9 years follow-up

*Tina S. Videbæk, Finn B. Christensen, Rikke Søgaard,
Ebbe S. Hansen, Kristian Høy, Peter Helmig, Bent Niedermann,
Søren Eiskjær, Cody Bünger*
Spine Unit, Aarhus, Sygehus Denmark

INTRODUCTION: Although lumbar spine fusion is an evidence-based treatment of low back pain, controversy still exists on the choice of surgery technique. The long-term claimed advantages of circumferential fusion (ALIF+PLF) over posterolateral fusion (PLF) lack scientific documentation. The original study with a 2-year follow-up was published in Spine*. At 2-years, ALIF+PLF restored lordosis, provided a higher union rate with significantly fewer repeat operations compared to PLF. AIM: To analyze the long-term effects of circumferential fusion using ALIF cages and titanium posterior instrumentation on functional outcome.

MATERIAL AND METHODS: From 1996 - 1999 a total of 146 patients with severe chronic low back pain were randomly selected for either PLF (titanium CD-Horizon) or ALIF+PLF (ALIF Brantigan cage). The Dallas Pain Questionnaire (DPQ), Low Pain Rating Scale (LBPR), Oswestry Dis-ability Scale (ODI), SF36, and EQ-5D assessed the functional outcome 5-9-years postoperatively.

RESULTS: A 5-9-year follow-up of 85%, showed that the ALIF+PLF group had a highly significant improvement in all 4 DPQ categories (daily activities ($p=0.005$), work/leisure ($p=0.01$), anxiety/depression ($p=0.02$), social concerns ($p=0.006$) and in all 3 questions regarding back pain (LBPR) ($p<0.01$) in comparison to PLF. According to ODI 44% had severe disability in the PLF group compared to only 17% in the ALIF+PLF ($p<0.02$).

CONCLUSION: ALIF+PLF fusion demands more extensive operative re-sources compared to PLF, however, 5-9 years after surgery the ALIF+PLF patients had a significantly improved functional outcome compared to PLF alone. This new result underlines the superiority of circumferential fusion in complex pathology of the lumbar spine and is strongly supported in all vali-dated questionnaires. *Christensen et al, Spine, 27(23), 2002.

Variation in use of blood transfusions among patients undergoing total hip arthroplasty at Danish hospitals

Alma B. Pedersen^{1,2}, Anders Riis², Ulf Lucht¹, Jan Jørgensen³ and Søren P. Johnsen²

1 Dept. of Orthopaedics and 2 Clinical Epidemiology, Aarhus Sygehus, 3 Dept. Clin Immunology, Skejby

INTRODUCTION: Total hip arthroplasty (THA) may be associated with considerable blood loss, and patients may require transfusion. We examined the risk of blood transfusion in patients undergoing THA at 15 different orthopaedic departments in Denmark.

MATERIAL AND METHODS: We identified patients with primary THA (n=8,757) registered in the Danish Hip Arthroplasty Registry between 1999 and 2004. Only patients from Aarhus, Funen, and North Jutland counties, and Rigshospitalet, Copenhagen were included. Data on use of blood transfusions were collected from the Danish Transfusion Database (DTDB). The outcome was defined as blood transfusion (yes/no) within 7 days after surgery. Logistic regression analyses were used to estimate the risk of blood transfusion (OR) and 95% Confidence interval (CI) adjusting for possible confounding factors including patient-related factors (age, gender, primary diagnosis for THA) and surgery-related factors (type of anaesthesia, type of implant, surgery time, and use of Non Steroid Anti-inflammatory Drugs). The risk of blood transfusion for each department was compared with the general risk of blood transfusion for all departments.

RESULTS: Overall blood transfusion were given to 3,062 of 8,757 patients (35%) (range between 15% and 64%, depending on department). After adjusting for different patient- and surgery-related factors, the adjusted ORs differed from 2.66 (95% CI, 2.07-3.43) to 0.30 (95% CI, 0.18-0.50) using all departments as reference.

CONCLUSIONS: Substantial differences in the use of blood transfusions among THA patients were found when comparing a sample of Danish orthopaedic departments. The differences in use of transfusions appeared not to be explained by a range of patient- and surgery- related factors and may thus reflect differences in transfusion policy.

Measuring Fragment 1.2 in Spot Urine to Detect Hypercoagulability in Hip Arthroplasty Patients

*Camilla Ryge MD, Michael R Lassen MD, Lars C Borris MD,
Morten Breindahl MD*

Phd Ortopædkirurgisk afdeling, Hørsholm Hospital, Danmark

INTRODUCTION: Fragment 1.2 (F1.2) is an indicator of thrombin generation and is measurable in a spot urine sample. We conducted a prospective, cohort study to assess the relationship between F1.2 in urine (uF1.2) in patients with and without a vascular thrombotic event/unexpected death (VE) within 3 months after total hip arthroplasty (THA).

MATERIAL AND METHODS: 113 patients undergoing THA were included in the study. All patients except 1 received thromboprophylaxis for 5-8 days. Spot urine samples were collected preoperatively and on the 5th postoperative day and stored at -80°C . We analysed levels of F1.2 using a standard ELISA method (Enzygnost F1.2, Dade-Behring, Germany). Differences in the pre- and postoperative uF1.2 levels for all patients and differences in the pre- and post-operative uF1.2 levels in patients with and without VE were studied using an Analysis of Variance (one-way ANOVA).

RESULTS: Within 3 months 10 patients (8.8%) experienced VE during the study period. In patients with VE the median uF1.2 level on day 5 was significantly higher than the level on day 5 in patients without VE ($p=0.004$), however there was only a trend towards a significant difference preoperatively ($p=0.06$).

The uF1.2 level on day 5 was significantly increased compared with the preoperative level in both patients categories ($p<0.0001$).

CONCLUSION: Measurement of uF1.2 in spot urine seems to be feasible method to evaluate the extent of hypercoagulopathy after THA. The principle may be used to identify patients in the need for prolonged thromboprophylaxis.

Colloss® E with Ossaplast® artificial bone graft is comparable to allograft in terms of implant fixation

*Jørgen Baas, Brian Elmengaard, Joan Bechtold,
Xinqian Chen, Kjeld Søballe
Afdeling E, Aarhus Sygehus*

INTRODUCTION: Morselized bone allograft is widely used for grafting revision joint arthroplasties. It is of clinical interest to replace allograft with an equally good bone graft substitute in abundant supply and with no risk of disease transfer. In the present study, we hypothesized that Colloss®E (Ossacur AG) would improve the fixation of implants grafted with β -TCP bone graft substitute Ossaplast® Ortho (Ossacur AG). We compared the results to allograft.

MATERIAL AND METHODS: CollossE is an equine bone lyophilisate. Ossaplast is β -tricalcium phosphate granules of 1-1.6mm and 90% porosity. We implanted four 2,5mm porous-coated Ti 2,5mm gap implants in the proximal humeri of each of the 10 included dogs. The gaps were grafted in the following manner:

- 1) Allograft
- 2) Allograft+CollossE 20 mg
- 3) Ossaplast
- 4) Ossaplast+CollossE 20 mg

RESULTS: After 4 weeks, mechanical fixation by push-out test was the same for the two allografted groups and the CollossE-treated Ossaplast group. Without CollossE, the bone graft substitute group had significantly poorer fixation. By histomorphometry, we found every control implant in the Ossaplast group to be covered by a dense fibrous membrane. No fibrous tissue was seen on implants where CollossE was mixed into the Ossaplast β -TCP granules. These implants were well osseointegrated with new bone covering 10-25% of the implant surface. All CollossE-treated groups had increased graft resorption. CollossE had no effect on new bone formation or fibrous tissue reduction in the allografted groups.

CONCLUSION: The results are promising, not only for replacing biological graft material with artificial inorganic grafts around orthopedic implants, but also in other aspects of orthopedic surgery where bone grafting is part of the treatment.

Outcome after treatment for displaced humeral head fractures with a cemented Neer 2 hemiarthroplasty

Bettina Falborg, Henrik Palm, Anne-Marie Fenger,

Kiran Anderson, Claus Hjorth Jensen

Department of Orthopaedics. University Hospital of Hvidovre

INTRODUCTION: Cemented Neer2 hemiarthroplasty has since 1994 been the treatment for displaced humeral head fractures (HH#) in our department. Outcome was retrospectively studied.

MATERIAL AND METHODS: 106 consecutive patients (86 females) were operated on from 1994 – 2004 due to a three or four part HH#. Mean age 75 years (44-89). Follow-up (FU) was done in 53 cases, as 34 died in the observation period, 12 refused and 7 were lost to FU. FU period was mean 43 months (4-106).

Radiological evaluation and clinical assessment using the Constant Score were performed at FU. Pain, patient satisfaction and social status were assessed separately.

RESULTS: Constant Score was mean 49 (8-71), flexion was mean 78° (28-155°) and abduction was mean 69° (25-130°) for the operated shoulder, compared with 78 (40-100), 164° (70-180°) and 159° (50-180°) for the contralateral. The VAS pain score was mean 3,4 (0-10) in movement and mean 4,9 (0-10) at maximal range.

Radiologically 6 prosthesis showed signs of aseptic loosening. Poor clinical outcome was correlated to flawed X-ray (too high/low placed prosthesis, loosening, non-healed tuberosities, periarticular calcifications or glenoid erosions) $p < 0,05$.

Overall complication-rate was 11%. Two patients had neurological complications, one superficial infection, one loosening of the greater tuberosity, one had clinical signs of loosening of the prosthesis and one suffered from pain and limited ROM. The latter three underwent reoperation. Postoperatively 32 patients (60%) returned to their prior social status. 34 patients (64%) were satisfied or very satisfied with the outcome.

CONCLUSION: The outcome of cemented Neer2 hemiarthroplasty in HH# is disappointing and flawed with complication. Patient satisfaction is however acceptable.

The GSB III Elbow Prosthesis in Rheumatoid Arthritis, a 2 to 14 years follow-up on 36 consecutive implants

Hjorth Jensen C, Jacobsen S, Sonne-Holm S

Department of Orthopaedics, University Hospital of Hvidovre

INTRODUCTION: The GSB III elbow prosthesis has been used for treatment of RA joint destruction since 1990. This study evaluates the long term outcome.

MATERIAL AND METHODS: Twenty-nine patients, (26W/3M), 54 years (31-78), with 36 implants were clinically and radiologically examined. Mean follow-up period was 87 months (24-173).

Clinical outcome was assessed by the HSS-elbow score. Preoperative joint destruction was evaluated according to Larsen. Postoperative quality of cementing technique was evaluated according to Schneeberger. Patient satisfaction was assessed at follow-up.

RESULTS: Preoperatively, all had grade 3-5 joint destruction. Post-operatively ROM in flexion/extension increased by 38°. ROM of forearm rotation increased by 66°. Mean HSS-elbow score was 85. 27 of 29 patients were satisfied with the end result. Two patients were not satisfied due to persistent pain. Radiologically, cementing technique of 3 humeral, and 8 ulnar components was inadequate. In 3 humeral, and 5 ulnar components radiologic signs of aseptic loosening were observed. Overall complication rate was 36 %. Two complete replacement revisions were performed due to gross aseptic loosening or deep infection. There were 7 cases of condylar fractures, 3 cases of malpositioning, 1 case of ulnar and 1 case of radial neuropathia.

CONCLUSION: Severe elbow joint destruction is common in RA, often necessitating joint replacement. Due to joint destruction, poor bone stock, and narrow medullary cavities, replacement surgery is fraught with complications. We present the long-term results of 36 GSB III prostheses in 29 patients followed for 7.3 years. Overall complication rate was 36%, comparable to other series. Improvement in ROM, overall clinical outcome and patient satisfaction was, however, satisfactory.

A retrospective study of 32 patients treated with the PHILOS plate

Henrik Friis Juhl, Martin Risom, Peder Burggaard, Henrik Grønberg
TraumeCentret, Ortopædkirurgisk Klinik, Rigshospitalet

INTRODUCTION: We present a retrospective study of 32 patients treated for proximal humeral fractures with the Proximal Humeral Internal Locking System (PHILOS).

MATERIAL AND METHODS: All patients treated with PHILOS since introduced at Rigshospitalet oct 2001 to july 2004 were identified (n=43).

Patients with diaphyseal fractures, pseudoarthrosis, failed previous ORIF, pathological fractures or ORIF > 14 days post-injury, totalling 11 patients, were excluded from further follow-up. In all 32 patients were included: 11 males (median age 58 [39-82]) and 21 females (median age 81 [24-92]). Six patients had died at follow-up. Fractures were classified according to Neer, 11 patients had 2-part fracture, 16 patients had 3-part fracture, and 5 patients had 4-part fracture. Shoulder function was assessed using the Constant Score (CS). One patient was unavailable for follow-up, 4 patients refused radiographic follow-up, but clinical follow-up was performed.

RESULTS: Median CS was 68 (15-92). Seventeen patients had no pain in the affected shoulder, 3 had mild pain, 4 had moderate pain and 1 patient (with AVN) had severe pain. No cases of implant failures or deep infections were recorded. No non-unions were found in available radiographs. One patient developed a painful avascular necrosis (AVN). Nationwide hospital records showed no surgical admissions for any of the dead patients. Thus implant-failure, painful non-union or infection in this group is not likely. In patients refusing radiographic follow-up, Constant Score suggested healing of all fractures. None of the 7 working patients had their occupational status affected. Nineteen patients were very satisfied or satisfied, 6 patients were less satisfied.

CONCLUSION: The PHILOS plate gives good functional results and high patient satisfaction.

Radiofrequency Microdebridement in treating Chronic Lateral Epicondylitis

Marc Strauss og Søren Kjeldsen

Silkeborg Centralsygehus, Ortopædkirurgisk afdeling

INTRODUCTION: Prolonged (more than one year) symptoms of lateral epicondylitis (LE) of the elbow seems difficult to treat. Recently, animal-studies had shown, that Radiofrequency(RF)-based microtenotomy was effective for stimulating an angiogenic healing response in tendon tissue, and another recent study in humans have shown effective relief of pain from lateral epicondylitis from 6 to 24 months after RF-based microtenotomy in 13 cases.

MATERIAL AND METHODS: Prospective nonrandomized consecutive case study. Patients with signs of osteoarthritis, nerve-entrapment or previous surgery were excluded. In the period from December 2003 until January 2005 seventeen patients were operated on for LE using TOPAZ (reg. trademark) Radiofrequency Microdebridement. Mean age was 46.1 years. Mean duration of symptoms was 24.1 (11-120) months. All patients received physiotherapy treatment from the 2nd postoperative week and was followed for clinical follow-up and VAS-score-assessment after 2 weeks, 6 weeks, 3- and 6 months.

RESULTS: Mean VAS-score declined from 7.25 (range 4.0 - 9.0) mm pre-operatively to 4.0 (range 0.0 - 8.5)mm six months postoperatively ($P<0.05$). No adverse effects were detected.

CONCLUSION: Radiofrequency Microdebridement and physiotherapy in treating LE results in a significant pain-relief after 6 months. However, further studies are needed for determining the ability of returning to pre-injury activity-level and for determining the effect of microdebridement and physiotherapy separated from each other.

Upper Extremity Surgery in Cerebral Palsy

*Claus Hjorth Jensen, Vibeke Forchhammer,
Margit Henriksen & Søren Anker Pedersen*

Departments of Orthopaedic Surgery and Pediatrics,
Hospital of Hvidovre

INTRODUCTION: In April 2000 an interdisciplinary protocol for the surgical treatment of patients with upper limb deformity was introduced at H:S Hvidovre Hos-pital. Patients treated during the first 5 years of practice were evaluated.

MATERIAL AND METHODS: Substantial elbow, forearm, wrist and finger deformities in patients with normal or near normal intelligence were the indication for surgery. The aim of treatment was to improve function.

19 patients (12 male) with cerebral palsy were operated on in accordance with the protocol, median age 11 years (4-31).

Each patient had a mean of 4 procedures.

RESULTS: Follow up by means of interview was carried out at median 23 months (3-57) of 18 patients by 2 occupational therapists. One patient was not interviewed but returned a questionnaire. 17 patients claimed improved function and 18 improved appearance of the hand.

No complications were encountered.

CONCLUSION: Surgical treatment of selected patients with upper limb deformity due to cerebral palsy may improve function and cosmetics of the hand if treated in accordance with the protocol. The complication rate appears to be low.

CT scan in glenohumeral deformity secondary to Obstrical Brachial Plexus Palsy

Margit Andreassen, Trine Torfing, Kurt Simesen & Lars Henrik Frich
Department of Orthopaedics & Radiology, OUH

INTRODUCTION: Successful treatment of the secondary deformities in Obstetrical Brachial Plexus Palsy (OBPP) depends on a careful preoperative clinical and radiological evaluation. The anatomical relations of the humeral head and the glenoid cavity, the humeral and glenoid retroversion and the deformity of the humeral head is particular important.

MATERIAL AND METHODES: Twenty-five consecutive patients who had secondary deformities to (OBPP) who were candidate fore operative procedures entered a prospective study (April 2003 to Marts 2005). CT- scan were preformed at OUH. All measurements according to a protocol were carried out by one of us (T. T.). Eleven patients were girls and 14 boys; their median age was 7 years (1-12).

RESULTS: The mean glenoid retroversion on the affected site was 20, 2 degrees (1 – 46) and 2, 4 on the unaffected site (minus 9 – 15). Four patients had 100% subluxation. In twenty-one patients the mean posterior subluxation was 27, 5 % (10 – 43).

Glenohumeral deformity: Minimal deformity 12. Moderate deformity post.subluxation 10. Sever deformity dislocation 3

Glenoid: normal (4), double facet (13), planar (5), sever post. defect (3). Humeral head normal 1, conoid or oval 15, flattened 6, trench or bifid defect 3.

Retroversion of humeral head: < 30 degrees (15) 30 -50 degrees (9), 50 - 70 degrees (1).

Coracoid overgrowth: normal (3), moderate (18), severe (4).

CONCLUSION: In all patients the glenoid retroversion was increased compared to the nonaffected side. All had glenohumeral deformity. Assessment of the humeral head retroversion is very difficult especially in the youngest patients.

Good correlations were found between CT and peroperative findings except in one case where the shoulder was dislocated at the time of surgery.

Management of contracture of the Gleno-Humeral joint after Obstetrical Brachial Plexus Palsy. An early report on arthro-scopic techniques

Lars Henrik Frich, Kurt Simesen & Susanne Jepsen

Department of Orthopaedics & Physiotherapy.

Odense University Hospital

INTRODUCTION: The management of Obstetrical Brachialis Plexus Palsy (OBPP) remains a vexing problem. A fixed contracture often develops over time and has a deleterious affect on glenohumeral (GH) development. Recently, Pearl (Arthroscopy 2003) have described an arthroscopic approach for release of the GH joint. The purpose of this study was present our approach to arthroscopic release.

MATERIALS AND METHODS: Fourteen (14) patients aged 11 months -13 years underwent arthroscopic release of the GH-joint. All patients suffered GH posterior-subluxations and 3 cases showed static posterior GH joint dislocation. Three (3) standardized release procedures were used depending upon the existing pathology: I) Sectioning of the anterior capsule and release of the rotator interval tissue (14 cases). II) Partial tenotomy of the Subscapularis tendon (12 cases). III) Synovectomy of the posterior capsule (6 cases). The release was considered complete when external rotation of 40° and internal rotation of 90° was achieved during surgery. Stability and irregularities of the joint was recorded.

Usually physiotherapy was begun immediately after surgery. Two of 3 patient suffering static dislocated GH-joints had their arm fixed in external rotation for 5 weeks.

RESULTS: Arthroscopic release was successful in achieving at least 45° of passive external rotation in all cases. Release of the posterior capsule and rotator interval tissue increased internal rotation by an average of 30°. No peroperative complications were recorded.

CONCLUSIONS: Our technique of partial tenotomy of the subscapularis tendon and rotator interval ecompression gives initial results comparable to open release techniques. Fixation of the arm in external rotation does not seem to be necessary except in cases of static dislocated GH-joints.

Rainbow traction in treatment of developmental and non-developmental dislocation of the hip

Adam Hede, Steen Bach Christensen and Hans

Henrik Strange-Vognsen

Section of Pediatric Orthopedics,

Department of Orthopedic surgery, Rigshospitalet, Copenhagen

INTRODUCTION: Prereduction traction is a controversial and expensive treatment. The purpose is theoretically stretching of secondarily contracted muscles such as the adductor longus and iliopsoas. This should allow reduction avoiding major joint forces and decrease the need for open reduction and the risk of proximal femoral growth disturbances.

MATERIAL AND METHODS: During the period July 1996 – July 2004 (8 years) 79 hips in 67 children with non-repositionable hip dislocation were treated with rainbow traction during three weeks immediately before hip reduction. Increasing hip abduction from zero to 60 degrees was applied during this period. All dislocations were classified as either developmental (DDH), i.e. late diagnosis in an otherwise healthy child, or as non-developmental.

RESULTS: The patients were followed for median 3.6 years after reduction. In the DDH group 43 of the 55 hips (78%) were treated with closed reposition, while 12 hips had to be operated on to obtain reposition. In the operative group no femoral shortening osteotomies had to be performed. There were three redislocations, all in patients operated on. 17 patients (31%) eventually had a femoral or pelvic osteotomy due to hip growth disturbances.

In the non-DDH group six of the 24 hips (25%) could be treated with closed reposition. In the remaining 18 hips no femoral shortenings were necessary. There were six redislocations, four of them in the operative group. Half of the patients in the non-idiopathic group had an osteotomy during the observation period.

CONCLUSION: Prereduction rainbow traction seems to reduce the need of open reposition, especially in developmental hip dislocation. It remains to be investigated, whether this treatment affects the risk of post reposition femoral head necrosis.

Rasch and factor analysis of the Danish Knee injury and Os-teoarthritis Outcome Score (KOOS)

Jonathan Comins, John Brodersen, Michael Krogsgaard, Nina Beyer
Dept. of Physical Therapy, Bispebjerg Hospital, Department of General Practice University of Copenhagen, Dept. of Orthopaedics, Bispebjerg Hospital, Institute of Sports medicine

INTRODUCTION: The Knee injury and Osteoarthritis Outcome Score (KOOS), an extension of the WOMAC score, is widely used to evaluate subjective outcome in knee patients. Notwithstanding, the psychometric properties of the instrument have never been assessed utilizing either Rasch analysis or factor analysis. The objective of the present study was to evaluate the Danish version of KOOS by using Rasch as well as exploratory factor analysis and to compare these results.

MATERIAL AND METHODS: We applied Rasch and factor analyses to 200 KOOS questionnaires from patients tested 20 weeks after ACL reconstruction and subsequent rehabilitation.

RESULTS: Factor analysis revealed that 36 of the 42 items loaded heaviest on the principal component, indicating that the five sub-domains more likely represent a single construct. Items, which loaded lightest in the factor analysis, were also among the most problematic questions clinically. Rasch analyses showed that only two of the five proposed subscales in KOOS fulfilled the criteria of a uni-dimensional measurement scale. Items, which did not function sufficiently in the factor analysis, lacked hierarchical ordering and did not discriminate between response categories with Rasch analysis. After we rescored more than half of all response categories in the items, twenty-five of the 42 KOOS items formed a single dimension, and twenty-four of these 25 items also loaded on the first component in the factor analyses.

CONCLUSION: The content of KOOS seems to be relevant for patients with knee problems; however, the psychometric properties of the instrument are insufficient for the assessment of ACL reconstructed patients. A new valid knee measure with one or more scales could be developed based on the content of KOOS.

ACL-reconstruction with tractus ileotibialis: a retrospective study of 234 ACL-reconst

*Albrecht-Olsen P, Hartkopp A, Nicolaisen T, Chrintz H,
Aagaard H, Have Dall C*
Idrætsklinikken, Frederikssund Sygehus

INTRODUCTION: At the Sports Medicine Clinic, Frederiksborg County, the preferred primary graft for ACL-reconstruction is a hinged part of tractus ileotibialis.

MATERIAL AND METHODS: During the period from 1.9.94 to 24.10.00 234 ACL-reconstructions were performed using this graft from the ipsilateral leg. The former technique has been revised using a shorter part of tractus, thereby reducing the muscular herniation the femoral canal is drilled in a retrograde way giving the best option for correct tunnel placement. This is a retrospective study, using partly information from patients records. Presently we are calling patients for new visits.

RESULTS: Median observation time is 72 mths (6 yers ranging from 50 -124 mths). Totally 94 pttts have now been reexamined. Soccer, handball and skiing were the primary causes for ACL-injury. Of the 234 reconstructions 22 had verified ruptures and 4 patients had a grade C IKDC and were also categorized as failures. The total failure rate was therefore 11 %. 12 of the patients had a new relevant trauma and 3 of the patients had their graft removed due to deep infection.

The median Lysholm score at follow-up was 92 in the 94 patients who have been reexamined until now and of these 90 patients have been categorised as either A og B using the IKDC scoring system.

CONCLUSION: We still find this type of graft to be a worthy alternative to BTB and hamstrings. We are presently calling more patients for re-examination. Therefore newer data will be presented.

A short video of the technique will be presented.

Iliotibial band ACL reconstruction – a systematic one-year follow-up

*Henrik Aagaard, Henrik Chrintz, Tom Nicolaisen,
Peter Albrecht-Olsen, Andreas Hartkopp*
Sports Clinic, Frederikssund Hospital

INTRODUCTION: ACL reconstruction with the iliotibial band has been controversial the recent years. The objective of this study was to examine the short-term effect of ACL reconstruction with the iliotibial band through systematic protocols.

MATERIAL AND METHODS: In 2003 and the first half of 2004 145 patients had primary ACL reconstruction with the iliotibial band. The patients were examined preoperatively and 12 months postoperatively according to a standardized protocol in order to compare preoperative with one-year postoperative status. Data were stored in a clinical database.

RESULTS: Data of 140 patients from the different preoperative examinations and tests were available to be compared with data of 108 patients from the 12-month follow-up. Both Lachman and modified total IKDC improved from preoperative median C (not normal) to A (normal) at 12 month follow-up ($p < 0.001$). KOOS scores of pain, sport and QOL increased ($p < 0.05$), and the scores of the two functional tests improved ($p < 0.05$). Seventy-nine six patients (95%) were willing to go through ACL reconstruction again

CONCLUSION: Patients benefited from ACL reconstruction in a one-year follow-up. The results seem to be comparable with results from the literature, but future short- and long-term follow-ups with more patients are needed to document this.

Equal tension in all four strands of a semitendinosus graft with a low profile tibial fixation device (Cobra LFD, Registered Trademark)

Lene Meldgaard, Søren Winge, Preben Duun, B.K.O Engström
Department of orthopaedics, University Hospital of Hvidovre

INTRODUCTION: This study introduces a novel tibial fixation device, the Cobra Ligament Fixation Device, registered trademark (Cobra LFD), for anterior cruciate ligament reconstruction, and presents a follow up using the device.

MATERIAL AND METHODS: The Cobra LFD allows a novel tibial fixation technique in ACL reconstruction with a quadruple semitendinosus tendon graft, where an equal tension in all four strands as well as a low profile tibial cortical fixation can be achieved.

The follow up is a 4 year follow up on 15 revision cases, median age 31(27-37), 17 were operated on using the Cobra LFD, one was excluded, one had moved abroad. The patients were evaluated by instrumented stability test with KT 1000, Lysholm score, Tegner activity level, range of motion, palpation of area of fixation, level of discomfort, tibial and femur tunnel diameter.

RESULTS: The Lysholm score was preoperatively median 65(45-80)increasing postoperatively to median 86(63-100). Tegner activity level: Before revision 11 cases were in the lowest "work" group, post-operatively 14 were in the recreational or competitive group. No patients had lag of extension, 3 had flexion lag of 5 degrees. 13 had no or minor tenderness of area of fixation and most patients had no discomfort during normal activity including sports. The tibial and femur tunnels were prepared to 8 or 9 mm, at follow up the tibial tunnel measured 11 mm (median) and the femur tunnel 10 mm (median).

CONCLUSION: The Cobra LFD can be recommended as an alternative for tibial fixation in ACL reconstruction, particularly for hamstring grafts or for revision surgery.

Correlation between bone bruise and pain in patients with injury of the anterior cruciate ligament

Torsten Warming, Kirsten Neergaard, Michael Krogsgaard.
Department Orthopaedic surgery and Department of Radiology,
Univer-sity Hospital of Bispebjerg

INTRODUCTION: A previous study has shown that patients with rupture of the anterior cruciate ligament (ACL) who develop bone bruise (BB), experience more pain than patients without BB.

The purpose of this pilot study was to examine if there was any correlation between the size or intensity of BB and the pain the patients experienced.

MATERIAL AND METHODS: 18 patients, 10 men and 8 women, mean age 28 years, with clinical and MR verified ACL injury and BB were included. Examinations with KOOS-score and MR-scan were performed at study entry and at day 14, 30 and 60 after the injury. A diary with daily VAS-score was completed. BB-size was measured in all four condyles (medial/lateral, femur/tibia) in two planes on a T2-FAT-SAT sequence. Intensity was evaluated (Ie) by the radiologist on a 0-5 scale and the mean intensity of the sagittal measured area (Im) was recorded. Statistics were Pearson correlations on pooled data across visits.

RESULTS: Cross-sectional data showed a significant ($p < 0.05$) positive correlation between BB, both intensity (Ie and Im) and size, and pain, measured by VAS-score ($r = 0.4-0.5$) and KOOS-pain score ($r = 0.3$) respectively, of the medial tibia condyle. Similarly a correlation was found between VAS-score and the size of the BB in the lateral femur condyle ($r = 0.4$), and between the KOOS pain score and intensity (Ie and Im) of BB in the lateral tibia ($r = 0.3$). There were no positive correlations between changes in BB and pain over time independent of the methods of measurement.

CONCLUSION: Cross-sectional correlation was found between both the size and intensity of BB and pain in the medial tibia condyle only. For all other sites of BB correlations were not consistent. It seems thus that the tibial BB is related to pain.

Dislocation of hemiarthroplasties of the hip with Vario-Cup

Abida S. Petersen, Frank Damborg, Lars Schjøtz, Niels J. Olsen
Department of Orthopaedics, Fredericia and Kolding Sygehus

INTRODUCTION: Patients with femoral neck fractures are treated according to the “Refer-enceprogram om hoftebrud”, so patients with Garden type III-IV fractures and age > more than 75 years are treated with hemiarthroplasty(HA). From August 2001 to August 2004 we used the Vario-Cup(VC), which is a bipolar HA with a locking ring and a cemented SP Lubinus stem. During this period we observed a high rate of dislocations and even worse separation of the HA during reduction. The aim of this study was to compare our dislocation rate and separation rate to literature.

MATERIAL AND METHODS: We reviewed the charts of all our 59 VC-patients.

Our dislocation rate was compared to dislocation rates in literature (1-4) as seen in table 1.

RESULTS: Table 1 shows number of treated patients in Kolding (0) and in the compared studies (1-4).

	0	1	2	3	4
Dislocation %	15(6.1-24.4)	4(2.3-5.3)	4.5(0.1-8.9)	3.5(1.1-5.9)	2.5(2.2-2.8)
Number (n)	59	612	88	228	8414

The separation rate during reduction was 33 %. It has not been possible to find literature on separation of hip HA.

CONCLUSION: In our material there was a higher dislocation rate compared to the above studies. It is even more critical, as there is a tendency to separation during reduction, leading to an open revision. As a consequence of this we have therefore stopped using the Vario-Cup, and cannot recommend it.

1)Noon; Injury 2005 2)Tellisi; Injury 2001 3)Isolato; Scand J Surg 2002 4)Varley; SICOT 2004

The role of Surgeon's Experience and Supervision on Reoperation after Hip Fracture Surgery

Henrik Palm, Steffen Jacobsen, Michael Krasheninnikoff, Nicolai B. Foss, Henrik Kehlet, Peter Gebuhr

Dept. of Orthopaedics and Anaesthesiology Hvidovre Hospital and
Section of Surgical Pathophysiology, Righospitalet

INTRODUCTION: We investigated the role of the performing surgeon's experience and the degree of supervision on re-operation rate among patients admitted with a proximal femoral fracture (PFF).

MATERIAL AND METHODS: Descriptive study of 600 unselected patients admitted with PFF to our university orthopaedic department between 2002 and 2004 in our multimodal rehabilitation programme, that aims at optimizing all aspects regarding surgery, anaesthesia, perioperative care and rehabilitation of PFF. The rate of reoperation was assessed 6 months postoperatively. Surgeon experience was grouped as follows: Qualified trauma specialists, qualified orthopaedic specialists with subspecialization in other fields, orthopaedic senior registrars and orthopaedic junior registrars. The junior registrars were grouped according to received supervision by a qualified trauma specialist, a qualified orthopaedic specialist, an orthopaedic senior registrar or not receiving supervision. PFF were stratified into technically un-demanding (Garden I-II femoral neck fractures, basocervical fractures, and Evans 1-4 trochanteric fractures), and demanding fractures (Garden III-IV and posterior dislocated Garden I-II femoral neck fractures, Evans 5 trochanteric fractures, and subtrochanteric fractures).

RESULTS: Junior registrars had a lower re-operation rate within 6 months, when supervised by a qualified orthopaedic specialist compared to not receiving supervision when performing technically demanding PFF (5.4 % vs. 28.6 %. $p = 0.006$). There were no differences in reoperation rate between experience of surgeon, when not considering supervision or difficulty of fracture type.

CONCLUSION: Junior registrars should receive supervision by trauma specialists when performing technically demanding PFF.

First hip fracture is followed by low frequency of second hip fracture within a short time frame. Intervention should have immediate effect

Tine Nymark (1,2); Jens M. Lauritsen(1,3); Ole Ovesen (1); Bernard Jeune (3); Niels Dieter Röck (1)

1: Dept. of orthopaedic, OUH. 2: Institute of Clinical Research and
3: Institute of Public Health, University of Southern Denmark

INTRODUCTION: Hip fracture patients represent a fragile group of elderly with increased morbidity and mortality. We have analysed the distribution of time following first hip fracture.

MATERIAL AND METHODS: All incident hip fractures in Funen County residents in 1994-2004. Verified fractures were sequenced within each patient using Danish person identifier.

RESULTS: In the period 10.177 fractures occurred. Exclusion of 187 cases with a first fracture before January 1st, 1994 resulted in a total of 9,990 incident hip fractures. 9,122 first hip fractures and 868 (8,7 %) second fractures. Fifty percent of the second fractures occurred within 12 months in men and 19 months in women. The number of patients dying is roughly six times higher than those sustaining a second hip fracture. The proportion of patients dying at two years was 36%, at five years 57%, whereas only 4% at two years and 6% after five years had experienced a second hip fracture. The proportion alive and still at risk of a second hip fracture was 76% at 6 months, 69% at 12 months, 59% at two years, 51% at three years, and 40% at five years.

CONCLUSION: A small proportion of hip fracture patients experience a second hip fracture and when they do it is within a short time frame from the first. More than half die within five years with-out ever experiencing a second hip fracture. This underlines the need to consider time from intervention to effect when choosing and evaluating possible strategies. Prevention strategies should focus on interventions resulting in enhancements of the everyday life situation with immediate effects. Cost effective strategies for enhancement of quality of life for this patient group should take this into consideration.

Prognostic factors for mortality and postoperative medical complications after hip fracture surgery

*Susanne Juhl Pedersen, Henrik L Jørgensen, Jes Bruun Lauritzen,
Benn Duus & BBH Hip Fracture Group*
Department of Orthopaedic Surgery M, Bispebjerg Hospital,
H:S, University of Copenhagen

INTRODUCTION: Hip fractures are associated with high mortality and morbidity as well as being a major cause of health care expenditure in the elderly.

The aim of this study was to identify prognostic factors for death (30 days, 3 and 12 months) and the development of one or more postoperative medical complication after hip fracture surgery.

MATERIAL AND METHODS: 535 consecutive hip fracture patients admitted to Bispebjerg Hospital between January 1st and September 30th 2003 and between November 1st 2003 and March 31st 2004 were included in the study. Data were initially collected to compare mortality and the rate of postoperative complications before and after an introduction of The Optimised Hip Fracture Programme. Cox regression and logistic regression analyses were used. Included were 127 men (23.7%) and 408 women (76.3%). Median age of the men was 81.0 years of age (range: 41-101) and of the women 86.0 years of age (44-100).

RESULTS: Independent predictors for death within 30 days were ASA-group 3-4 ($p=0.02$), pneumonia ($p=0.002$) and electrolyte disturbance ($p=0.004$) at admission, pre-fracture nursing home residence ($p<0.001$), postoperative stroke ($p<0.001$), congestive heart failure ($p=0.02$) and pneumonia ($p=0.001$).

Being old ($p=0.002$) or categorised as ASA-group 3-4 ($p=0.002$) increased the risk of having a complication. Pre-fracture community dwelling ($p=0.01$), receiving treatment and care according to Optimised Hip Fracture Programme ($p=0.02$) reduced the risk of developing complications.

CONCLUSION: Preoperative acute illness and postoperative complications were the most important risk factors for mortality. Old age and frailty were predictors of postoperative complications, but The Optimised Hip Fracture Programme reduced the rate of complications.

Patient satisfaction after knee arthroplasty

Torben Sandberg Sørensen, Snorre Stephensen, Lars Møller
Orthopedic Dept., Frederiksberg Hospital

INTRODUCTION: Are we able to fulfil the patient expectations in arthroplasty surgery. Only few studies deal with these aspects. We have compared patient satisfaction after knee arthroplasty with clinical assessment and we have looked for predictors for the degree of satisfaction.

PATIENTS AND METHODS: Patients with knee arthroplasties performed at our department since 1997 have been assessed according to Knee Society Clinical Rating System (KSCRS) preoperatively and at 6-month follow-up. Patients assessed their degree of satisfaction at 6-month follow-up according to a 4-point ordinal scale. Data has been stored in a database, which also included data concerning previous operations, type of implant and postoperative complications. Selected for the study were patients with osteoarthritis operated with primary arthroplasty in the period 1997-2003.

RESULTS: 1410 arthroplasties in 1216 patients fulfilled the criteria for inclusion. For 1314 arthroplasties the patient satisfaction were recorded. For 65% of the arthroplasties the patients were very satisfied, 24% satisfied, 8% not quite satisfied and 3% dissatisfied. There was positive correlation between degree satisfaction and postoperative KSCRS (pain and function) and the postoperative increase in ROM. No correlation was found between degree of satisfaction and preoperative KSCRS, and no differences were seen between unicompartmental versus total replacement. Patients with previous osteotomy or postoperative complications (deep infection, DVT/PE, patellar dislocation etc.) were significantly less satisfied.

CONCLUSION: Knee arthroplasty is followed by a high degree of patient satisfaction. There are good correlation between patient satisfaction and the KSCRS. Postoperative complications predict less degree of satisfaction.

Short term results on PFC Sigma Rotating Platform

Wisam Yussef, Upender Singh, Kim Engfred

Ort. kir. afd. KAS Herlev

INTRODUCTION: In January 2003 the orthopedic ward at Herlev University Hospital started using the PFC Sigma rotating platform as the standard prosthesis for primary total knee replacement. This is one year follow up on the production of the first year

MATERIAL AND METHODS: Medical records for patients admitted to hospital for primary TKR were evaluated, and basic information regarding pain, ROM, and mobility were recorded, as was days of hospital stay, form of anesthesia, diagnosis, whether or not the patients had received physiotherapy. If complications were described in the medical record or reoperations had taken place this was recorded.

RESULTS: Ninety-six TKR's with PFC Sigma rotating platform were performed during 2003. We found a considerable improvement in pain score, less in mobility and ROM. Eighteen patients had some kind of complication, which will be described in detail, 7 of these needed additional surgery. One died from complications related to an epidural abscess

CONCLUSION: Though this is elective surgery there is a high risk of complications, both related to surgery and the patient's medical condition. Despite of this all of the patients had their primary TKA in situ after the first year, and most of them with satisfactory outcome.

Dysfunction and general health status of patients over 65 years undergoing total hip-replacement

Britta Hørdam, Kjeld Søballe, Svend Sabroe
Ortopædkirurgisk afdeling, Aarhus Sygehus

INTRODUCTION: Total hip replacement is regarded as a very efficient operation in terms of pain-relief and improvement of walking ability. However, after the operation many of the patients still suffer from dysfunctions and low general health status leading to reduced functional ability. A rehabilitation programme which focuses on self-care might improve the outcome of THR.

Aim of the study: To describe self-rated physical and general health and types of dysfunctions among patients undergoing THR.

To analyze the associations between type of dysfunctions and general health status according to gender, age, living alone and dependency on others for help.

MATERIAL AND METHODS: A cross-sectional-study including 287 patients above 65 years undergoing THR during a period of 12 months was performed. Patients from five counties in Denmark were included. Self-rated physical dysfunction and general health status were recorded using SF-36.

RESULTS: Women, patients living alone, patients dependent on help from others and patients above the age of 75 experienced a significantly higher risk of dysfunctions. Patients, who depended on help from others and patients living alone had a significantly lower general health status.

CONCLUSION: The results obtained with respect to self-rated physical dysfunction and general health status are unsatisfactory in some specific groups of patients undergoing THR.

The results from an ongoing intervention study (RCT) will facilitate the development of clinical guidelines to enhance the clinical outcome after THR.

Cost analysis of minimally invasive surgery compared to standard primary total hip replacement

Søren Overgaard, Rikke Juul Larsen, Ole Ovesen

Ortopædkirurgisk afdeling O, OUH og Center for Anvendt Sundheds-tjenesteforskning og Teknologivurdering (CAST), Syddansk Universitet

INTRODUCTION: Minimally invasive surgery (MIS) in total hip arthroplasty (THA) is a new technique, which might be promising with regard to faster rehabilitation and shortened stay in the hospital. However, increased costs are expected because of longer operating time and use of extra devices during surgery.

MATERIAL AND METHODS: In this economic analysis the incremental costs of MIS compared to standard THA are estimated. Thus, only costs which are expected to differ between the procedures are estimated. Activity-based costing is used as a basis for determining the costs by first identifying the activities involved in a THA, and secondly identifying and measuring the resources used in each activity.

RESULTS: The operating room is the main activity centre, where resource used and hence costs varied between MIS and standard THA. It was estimated that a MIS procedure approximately lasts for 150 minutes (in a pilot serie) and a standard cementless THA procedure approximately lasts 60 minutes. This gives an incremental cost of DKK 6,000 for MIS. Included in the resource use is staff, a per minute capital cost of buildings and standard equipment, a per procedure capital cost of equipment used only by MIS, and materials. The main components were staff, which accounted for 75% of the incremental costs of MIS, and special equipment for the MIS, which accounted for 22%. If length of stay is reduced by two days, MIS and standard THA will be equally costly.

CONCLUSION: The economic analysis shows that although MIS seem to be more costly than standard THA, the incremental costs are not exceptionally high, and may even be lower, if the operating time for MIS can be shortened

14 years results 593 total hip replacements Harris/Galante cup combined with the Spotorno cls cementless stem, or Müller straight stem

*Kim Engfred, Upender Singh, Vivian Petersen,
Tom Lemser, Steen Mejdahl
Ort. kir. KAS Herlev*

INTRODUCTION: Clinical outcome and survival rate of the Harris/Galante 1 cup (HG 1 cup) combined with two different stems.

MATERIAL AND METHODS: A retrospective study of patients who underwent surgery in the years 1986-1989. There was a total of 593 THR, 264 patients died prior to the investigation. All deceased were checked in the danish patient registry for revision. 128 THR were operated with the Spotorno CLS stem and HG 1 cup, 465 THR with the Müller straight stem and HG 1 cup. Two hundred and seventy patients with 297 THR were assessed radiographically and according to a modified Harris Hip Score (ROM was not used). The median age was 69,4 (range 18,3 - 88,1) for all, for the Spotorno CLS group 55 years (range 18-72) and for the Müller straightstem group 72 years (41-88). Male/female ratio: 0,56. Average follow-up was 13 years (range 9,1 - 15,1). The primary diagnosis was osteoarthritis in 538 hips, RA 10, fracture sequelae 15, congenital dislocation 14, others contributed with 16 hips.

The survival rates were calculated using the Kaplan-Meier method.

RESULTS: Thirty five patients have been revised: 21 because of aseptic loosening, 4 because of femoral fracture, 5 because of dislocation, and 1 because of infection. Four liners were revised because of polyethylen wear. After 13 years the survival rate for the cups was 96,8% including reoperations for polyethylen wear, for the femoral Müller stem 91,2% and for Spotorno CLS 96,1 %

CONCLUSION: The Harris/Galante cup and spotorno stem show excellent survival rate after 13 years, and for the Müller stem inferior to most other prosthesis. The relatively high number of polyethylen wear in the CLS group we believe to be a consequence of the younger patients more active lifestyle.

Acetabular migration after Ganz osteotomy examined by radiostereometric analysis

Inger Mechlenburg¹, Søren Kold¹, Lone Rømer², Kjeld Søballe¹

¹Department of Orthopaedics, University Hospital of Aarhus,

² Department of Radiology, University Hospital of Aarhus

INTRODUCTION: Early joint preserving surgical treatment of hip dysplasia is presumed to prevent or postpone the natural history of arthritis. At the operation the osteotomized acetabular fragment is reorientated in an adducted, extended and rotated position. Two screws fixate the acetabular fragment and the patients are allowed 40 kg weight bearing immediately after surgery. We were interested in examining the stability of the reorientated acetabulum after Ganz osteotomy and accordingly the migration of the acetabular fragment was assessed by radiostereometry.

MATERIAL AND METHODS: Twenty seven dysplastic patients, twenty two females and five males were included in the study. Median age was 38 (20-54) years. At the time of the operation, five spherical tantalum markers were inserted into the acetabular fragment and five markers were inserted into the pelvic bone above the fragment. Radiostereometric examinations were done at one week, four weeks, 8 weeks and six months. Data are presented as mean with 95% CI.

RESULTS: Six months postoperatively, the acetabular fragment had migrated 0.8mm (0.5–1.2mm) medially, and 0.8mm (0.5-1.0 mm) cranially. Mean rotation in valgus direction was 0.8° (0.2-1.5°). In other directions, migration was close to zero.

CONCLUSION: This is the first paper dealing with radiostereophotogram-metric analysis in Ganz osteotomy. Due to the very limited migration, we find our postoperative partial weight-bearing regime safe. The osteotomy was not healed after 8 weeks, as migration still occurred between 8 weeks and 6 months.

The use of constrained liners for prevention of dislocation in total hip arthroplasty

*Roland Knudsen, Ole Ovesen, Per Kjærsgaard-Andersen,
Søren Over-gaar*

Departments of Orthopaedic Surgery,
Odense University Hospital and Vejle County Hospital

INTRODUCTION: Dislocation following THA is a serious complication. There are different options for treatment of recurrent hip dislocation of which the use of a constrained liner (CL) exists. CL may also be used as a prophylactic procedure for dislocation in primary THA. The purpose of the present study is to report our results and complications with the use of a CL in a retrospective study.

MATERIALS AND METHODS: Fortyfour patients operated either at Odense University Hospital or Vejle County Hospital with 44 CL, on the indication primary or secondary prophylactic treatment, were included. Eight patients had a CL inserted as a primary prophylactic procedure whereas 36 in the secondary group had a CL inserted due to recurrent dislocation. In the primary group the median observation period was 4 months (range 1-46 months) and in the secondary group 23 months (range 2-66 months). They experienced 5.5 dislocations (range 1-19) before they had a CL inserted. Primary hip disease, any co-morbidity, subsequent dislocation or revision were registered. X-rays were evaluated with regard to implant position, osteolysis or fracture of locking ring.

RESULTS: During the observation period 5 patients (11 %) had to be revised: 2 because of deep infection, 2 because of dislocation with a broken locking ring and the CL in situ and 1 because of dislocation with the locking ring intact and liner in situ. If we exclude patients reoperated due to infection the implant survival is 93%.

DISCUSSION AND CONCLUSION: In this study we were unable to include a control group. However, our results indicate that this subgroup of patients with high risk for or recurrent THA dislocation can be treated with a CL and a satisfactory low complication rate.

Bone Mineral Measurements along THA and TKA. The significance of improved software

P. Martin Gehrchen & Michael Mørk Petersen

Bone Mineral Research Laboratory, Dpt. of Orthopaedic Surgery
U2161, National University Hospital, Rigshospitalet

INTRODUCTION: Measurements of bone mineral changes along implants such as Total Hip Arthroplasty (THA) and Total Knee Arthroplasty (TKA) has been performed for years. At our department we use the Norland DEXA scanner when measuring BMD and BMC. To improve the measurements, modifications of the software package has been performed several times, typically to make the procedures easier and to reduce time of analysis, in corporation with the industry.

The purpose of this study was to evaluate the significance of the new software on measuring bone mineral changes along THA and TKA.

MATERIAL AND METHODS: 12 patient were analysed (6 THA/6TKA). Measurements were performed in predefined regions along the implants postoperatively and repeated after 3, 6, 12 and 24 months.

RESULTS: The results of the measurements in the regions were clearly influenced of using the new software, compared to the old software. Thus both the single values in one region as well as the changes over time were affected.

Examples: THA: in the throchanter a loss of 3.3% were seen over a 1 year period using the old software compared to a loss of 7.5% using the new software.

Correspondingly for TKA: posteriorly a loss of 10% was seen compared to a gain of 1%

CONCLUSION: The newest upgrade of the Norland software has proven to reduce time of analysis significantly and furthermore it has impact on the measurements itself.

Fixation of hydroxyapatite coated revision implants is improved by cracking the sclerotic bone rim

Elmengaard, Brian; Bechtold, Joan E; Chen, Xinqian; Søballe, Kjeld
Dept. of Orthopaedics Aarhus sygehus and Midwest orthopaedic and
Minneapolis Medical Research Foundations, Minneapolis MN

INTRODUCTION: Revision hip implants have poorer clinical outcome than primary implants. In previous studies, we have shown that fixation of Ti revision implants was significantly improved with a low energy surgical technique that locally disrupts the sclerotic bone rim which typically forms during the aseptic loosening. We hypothesized that locally cracking of the sclerotic bone rim prior to insertion of revision HA coated implants will increase the mechanical fixation and osseointegration compared with HA coated implants using a standard revision procedure.

MATERIAL AND METHODS: In the distal femurs of 8 canines a revision cavity with formation of a sclerotic endosteal bone rim was created by a loose pistoning implant in the presence of PE particles for 8 weeks. On one side a control revision procedure of fibrous membrane removal and lavage was performed. Contralaterally the sclerotic bone rim was cracked (locally perforated) by a splined tool after fibrous membrane removal. On both sides weight-bearing HA coated revision implants were inserted. Observation period was 4 weeks. Evaluation by push-out test and histomorphometry. Data as mean and 95% CI.

RESULTS: The mechanical fixation was superior with the cracking technique. Shear strength was 3.0 (2.3-3.8)MPa vs. 1.6 (1.1-2.1) in the control group ($P<0.01$). Shear stiffness and energy absorption were equally increased. Significantly more bone ongrowth 41%(33-48) vs. 27(16-37) and significantly less fibrous tissue 9(-6-24) vs. 65(43-87) was seen compared to the controls ($P<0.001$). Less fibrous tissue was seen in the gap.

CONCLUSION: Cracking of the sclerotic rim is beneficial with HA coated implants. Local perforation of the bone rim may represent an alternative to complete removal of the sclerotic rim by reaming.

Sequential medial ligament release a.m. Matsueda. An in vitro study under use of a navigation system

*Carsten Perlick, Lars Perlick, Holger Bächis, Tobias Hüfner,
Christian Lüring*

Department for Orthopedic Surgery University of Regensburg,
Trauma Department Hannover, Aalborg University Hospital

BACKGROUND: Knees with severe varus deformity and contractures of the medial and lateral collateral ligaments and the posterior capsule acquire a special soft tissue management to gain a stable knee over the full range of movement. Introduction of navigation systems to knee surgery allow a precise performance of the leg axis and gap size.

METHODS: Ten knee joints received a computer assisted total knee replacement (Ci® navigation system DePuy® I-Orthopaedics, Munich) The change of the leg axis and the size of the medio-lateral gaps were measured and documented when performing a standardised medial ligament release sequence.

RESULTS: We found a significant effect after each release step for as well leg axis as change of the gap width ($p < 0,001$). The highest effect was seen for the 6cm capsule release in extension and the release of the medial collateral ligament in 90 degrees flexion.

CONCLUSION: Implementation of computer assisted surgery in total knee arthroplasty allows this first navigation controlled study with visualization and quantification of the effect of the sequential medial soft tissue release in total knee arthroplasty.

Alteration of hip joint centre during acetabular reaming

Thomas Baad-Hansen, Walther Fledelius, Søren Kold, Poul Torben Nielsen, Kjeld Søballe

Department of Orthopaedics, Aarhus University Hospital, Denmark,
Northern Orthopaedic Division, Aalborg

INTRODUCTION: Total hip arthroplasty is designed to replicate the relatively simple ball-and-socket structure of the hip joint and replace the painful and diseased hip joint with equally good function as the normal hip. The aim for re-establishment of correct anatomical hip centre location is of vital importance since, unfortunately hip revisions due to dislocations and leg length inequality are frequently reported in the literature.

MATERIAL AND METHODS: We measured 18 cadaver acetabuli before and after acetabular reaming to determine the change of hip centre location. Two different acetabular reamers were applied to the acetabular cavity, a chamfered reamer dome intended for minimal invasive hip surgery (MIS) and a conventional hemispherical reamer dome. A 3D optical scanning system – ATOS II SO, created 3D models of the cavities prior to, and after the reaming procedure. The two 3D models were merged into a single 3D model and displacements in all 3 dimensions were calculated.

RESULTS: No significant difference between MIS and conventional reaming was found with regard to resulting vector length ($P=0.9$). The mean measured medial, cranial and dorsal displacement was 2,9mm (SD. 2,2 mm), 1,8mm (SD. 1,2mm) and 0,8mm (SD.0.4mm) respectively. The mean length of the resulting vector was 3,6mm (SD. 2,4mm) range 0,6 - 9,2mm.

CONCLUSION: We conclude that the alteration of the hip centre location is not influenced by the changes made to the MIS reamer domes in comparison with conventional reamer domes.

The use of strong analgesics after implementing a standardized regime for the treatment of postoperative pain following THA-surgery

Anders Troelsen, Jens Nicolaysen, Marianne Breddam
Southern Orthopedic Division, Aabenraa Hospital

INTRODUCTION: In daily practice the treatment of pain with strong analgesics is looked at with anxiety by many patients because of the fear of addiction. The purpose of this study was to examine the use of strong analgesics at the time of discharge after implementing a standardized regime for the treatment of postoperative pain following THA-surgery.

MATERIAL AND METHODS: In Feb. 02 we implemented a standardized regime for the treatment of postoperative pain following THA-surgery. From the evening before the day of surgery all patients receive treatment containing weak analgesic, antirheumatic and strong analgesic tablets. In addition there is a p.n. ordination of supplemental strong analgesics. The intention is to phase out the use of strong analgesics in 5-7 days and there is a plan to handle the continued need for strong analgesics at the time of discharge. It was registered what treatment the patients were receiving at the time of discharge. 43 patients were included. For the patients still being treated with strong analgesics we examined if there was a continued use at follow-up. We registered the number of days of admission.

RESULTS: At the time of discharge 6 of 43 (14%) patients were still being treated with strong analgesics. Only 1 (2%) of these patients had a continued but reduced use of strong analgesics at follow-up 3 months postoperative and this was because of non-hip related pain. In average the patients were admitted for 9,2 days.

CONCLUSION: The results suggest that there should be no fear of addiction to strong analgesics after treatment of postoperative pain following THA-surgery. It is a weakness of this study that there are no standardized criteria for allowing discharge of patients. For future improvements such criteria should be implemented.

STPI prosthesis – A solution for the treatment of STT joint osteoarthritis

Nina Vendel Jensen, Dorte Stumpe, Niels H.Søe Nielsen

Department of Orthopaedics, Section of Handsurgery and Department of Occupational Therapy, Gentofte University Hospital

INTRODUCTION: Few reports have focused on isolated osteoarthritis (OA) of the scaphotrapezial and scaphotrapezoidal joints which occurred in 15% to 30% of wrists and generally occur bilaterally. A number of surgical techniques such as traditional trapezial resection, STT-arthrodesis and sili-cone prosthesis have been used with a varying of success. We introduce a pyocarbon STT spacer implant without the problems previously seen with silicone.

MATERIAL AND METHODS: The study included 9 patients (4 men and 5 women; mean age 62) with isolated STT OA, stage 3 and 4 and continued pain without effect of conservative treatment. The mean follow-up in our preliminary study was 17 months (25mo to 6mo). Two patients were operated on both STT-joints. Grip-strength, pain-score, Mayo Wrist Score, X-ray and satisfaction were recorded.

RESULTS: Pain-score was decreased in all except one. This patient was re-operated with an STT-arthrodesis because of OA between the trapezium and trapezoid seen on a CT-scan and confirmed at the operation. Grip-strength was increased in 2/3 of the patients after 3-6 months. Mayo Wrist Score was increased in all except one patient.

All patients except one felt that they were better than before the operation. No luxation of the implant was observed.

CONCLUSION: Follow-up period is very short but we concluded that the methods and the spacer techniques are reliable. We also concluded that, it is advisable with at CT-scan before operation to exclude patients with OA between the trapezium and trapezoid.

The severity and extent of residual symptoms at one-year follow-up after Commotio Cerebri (CC)

Mikkel Mylius Rasmussen, Dorte Aarup Clemmensen, Steffen S. Jensen
Ortopædkirurgisk afdeling T10, Sygehus Viborg

INTRODUCTION: The purpose of this study is to delineate residual symptoms one-year following CC and to compare with reported symptoms at one-month follow-up in the same population.

MATERIAL AND METHODS: We used the criteria's for inclusion proposed by "American Congress of Rehabilitation Medicine" '93:

A) A direct head trauma and ≥ 1 of the following:

- Loss of consciousness
- Amnesia
- Altered consciousness
- Reversible neurological signs

B) Severity not exceeding: • Loss of consciousness > 30 min • GCS < 13 after 30 min • Posttraumatic amnesia (PTA) > 24 h

Patients admitted to the Emergency Clinic at Viborg County Hospital in the period July 1st to December 31st 2003. All patients were registered prospectively and consecutively. At both one-month and one-year follow-up patients were interviewed by phone using a standard questionnaire. 115 fulfilled the inclusion criteria. 15 were excluded at one-month follow-up leaving 100 patients interviewed (88 %). At one-year follow-up further 13 were excluded leaving 87 patients (76 %).

RESULTS:

	1 month post CC	1 year post CC
Symptomatic patients.	40 %	29 %
Average number of symptoms reported pr. symptomatic patient.	9,1	6,7
Average nuisance of symptomatic patient. (VAS scale 0-10)	5,9	6,7
Sick-leave from work (% of symptomatic patients.)	69 % (Period: 1 day → 1 month)	28 % (Period: 1 month → 1 year)

CONCLUSION: 1) 29 % of patients had residual symptoms at one-year follow-up; 2) Average number of different symptoms declines in the follow-up period (9,1 -> 6,7). However nuisance with remaining symptoms increases (5,9 -> 6,7); 3) Among symptomatic patients at one-year follow-up, only 28 % reports sick absence exceeding 1 month post CC.

Systematic review: agreement among doctors classifying proximal humeral fractures according to the Neer system

Stig Brorson(1) and Asbjørn Hróbjartsson (2)

(1)Amager University Hospital, Dept. of Orthopaedics,

(2) Nordic Cochrane Centre

INTRODUCTION: Several studies have reported low agreement among doctors classifying proximal humeral fractures according to the Neer system. Our aim was to systematically review studies of observer agreement, and study factors that could potentially influence the level of agreement.

MATERIAL AND METHODS: A systematic review. We searched for observational studies in which doctors classified according to the Neer system, and randomized trials of interventions aimed at improving agreement. Potential eligible studies were analyzed and data extracted using pre-tested forms. The authors of all studies were contacted for missing information. Summary statistics for observer agreement was noted and the methodological quality of included studies was assessed. Results were summarized qualitatively.

RESULTS: Eleven observational studies and one randomized trial were included with a total of 102 observers and 510 cases. Mean kappa-values for inter-observer agreement ranged from 0.17 to 0.52 for classification based on plain radiographs. Agreement did not improve through selection of experienced observers, by adding advanced pictorial modalities (CT or 3D CT), or through modification of the classification. Intra-observer agreement was generally moderately higher than inter-observer agreement. One randomized trial reported a significant effect of training (mean kappa-value 0.62 after training compared to no training 0.33, $p = 0.006$).

CONCLUSION: Doctors disagree substantially when classifying according to the Neer system. Agreement does not improve through selection of experienced observers, advanced pictorial modalities, or modification of the classification. Training of observers seems to improve agreement.

In-Hospital Hip Fractures Prevalence, Risk factors and Outcome

Henrik Palm, Nicolai Bang Foss, Henrik Kehlet

The Hip Fracture Study Group, Dept of Orthopaedics and
Anaesthesiology Hvidovre Hospital and Section of Surgical
Pathophysiology, Righospitalet

INTRODUCTION: A hip fracture may occur as a complication during hospitalization for other reasons. No recent data exist on the prevalence, pre-fracture characteristics or the outcome of these patients compared to hip fractures occurring in the community.

MATERIAL AND METHODS: Descriptive study of 600 unselected patients received at the department of orthopaedic surgery with a primary hip fracture. Patients who suffered their hip fracture while already hospitalized for other illness were analyzed for fall history, preventive measures taken at the time of the accident and outcome.

RESULTS: 44 patients or 7 % (CI 95 % 0.05-0.09) of patients presenting with a primary hip fracture suffered a fracture while already hospitalized. The patients were primarily (77 %) admitted to acute medical or surgical wards. 55 % already had a planned date of discharge at the time of their fracture. Despite 52 % of the patients having a known history of falls pre-fracture only four had a fall evaluation and no patients had any specific preventive measures undertaken. Postoperative length of stay was significantly longer in the group with in-hospital fractures, 22 days vs. 10 days ($p < 0.01$), and hospital mortality was 25 % vs. 10 % in patients with fractures occurring in the community ($p = 0.03$).

CONCLUSION: Hip fractures in hospitalized patients constitute about 7 % of the overall hip fracture population, occurs predominantly in acute care wards and have a very poor outcome. More than 50 % of these patients have clear risk factors for falls including previous falls in the ward, calling for further research on fall prevention.

Characterization of adeno associated viral transduction of adult human mesenchymal stem cells

*Stefan Stender, Mary Murphy, Carsten Stengaard,
Michael Ulrich-Vinther, Kjeld Søballe, Frank Barry*

Regenerative Medicine Institute, National University of Ireland,
Galway, Ireland and The Department of Orthopaedics,
Aarhus University Hospital, Denmark

INTRODUCTION: Genetically modified adult mesenchymal stem cells (MSCs) might be useful in a range of clinical settings. Adeno associated virus (AAV) is the safest viral vector currently available. AAV transduction of MSCs has not been fully explored. Our objective was to examine the efficiency and kinetics of transduction of AAV2 in human MSCs.

MATERIALS AND METHODS: hMSCs were isolated from bone marrow and transduced with AAV2-eGFP at $1-10^4$ multiplicities of infection (MOI). The transduction efficiency and mean fluorescence intensity (MFI) were determined by flow cytometry 2-32 days post transduction. To examine the cellular uptake of AAV, supernatant from transduced hMSCs was assayed for infectiousness. In order to evaluate the potential effects of transduction on multipotency, transduced hMSCs were induced to undergo chondrogenic, osteogenic and adipogenic differentiation and compared with untransduced cells.

RESULTS: Transduction efficiencies ranged from 1 to 75% as the MOI was increased from $1-10^4$. The percentage of GFP-positive cells reached a maximum after 4 days and rapidly declined thereafter. The MFI of GFP-positive hMSCs was low compared to 293-cells transduced at substantially lower MOIs. More than 50% of virions, regardless of MOI, were cleared by hMSCs after 24h, suggesting an efficient cellular uptake of virions. Importantly, transduced hMSCs retained their multipotency.

CONCLUSION: 1. AAV2 transiently transduces hMSCs in vitro with efficiencies of up to 75%, 2. Transgene expression is low, 3. Cellular uptake is not a major rate limiting factor, 4. AAV2-eGFP transduced hMSCs retain multipotent activity comparable with untransduced cells.

Experimental porcine model of intervertebral disc degeneration

*Michael Bendtsen; Tina Mygind; Li Haisheng; Zou Xuenong;
Hans Stødkilde Jørgensen; Cody Bünnger*
Ortopædisk Forsknings Lab. Århus Sygehus NBG;
MR-forskningscenteret Skejby Sygehus

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

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

RESULTS: All pigs went through the observation period without complications. All levels treated with scalpel incision were degenerated. The apparent diffusion coefficient (ADC) of levels treated with scalpel incision were significantly lower than controls ($p=0.021$). There was no significant difference in diffusion through the endplates/subchondral bone. All intervention levels had a significantly lower signal intensity (SI) on T2 weighted MRI in the left and anterior NP. Levels with scalpel incision also had lower SI in medial, right, and posterior NP. There was a trend that disc height was lower in scalpel incision levels compared to pre-operative height ($p=0.085$). Notochordal cells disappeared in scalpel incision levels and were replaced by chondrocyte like cells. There was a drastic decrease in proteoglycan and increase in collagens- especially type VI.

CONCLUSION: Even though the pig is a growing animal we think that this model resembles early human intervertebral disc degeneration and is suitable for testing novel tissue engineering therapies.

The effect of hyaluronan on osteogenesis of porcine bone marrow stromal cells in vitro

Lijin Zou, Xuenong Zou, Haisheng Li, Tina Mygind, Cody Bunger
Orthopaedic Research Lab, Aarhus University Hospital

INTRODUCTION: Hyaluronan(HA)is an important component of the extracellular matrix(ECM). Our previous study demonstrates that 800 KDa HA can stimulate porcine bone marrow stromal cell(BMSC) proliferation, osteocalcin gene expression and increase ALP activity in vitro in a dose-dependent manner at the early stage. The aims of the present study were to investigate if (i) the prolonged presence of high concentration (4.0mg/ml) 800 KDa HA(ii) the previous expansion in HA can enhance osteogenesis.

MATERIAL AND METHODS: The first passage pBMSCs were plated in either basic medium or supplemented with 4.0 mg/ml HA and cultured for 7 days. Thereafter, BMSC were divided into the following groups (1)Previous expansion in Basic medium including HA: (i)Basic medium group: DMEM+10% FBS; (ii)Dex group: Basic medium +Dex+ β -GP+Ascorbic acid; (iii)HA group: Basic medium +HA; (iiii)HA+Dex group: Basic medium +Dex+ β -GP+Ascorbic acid +HA. (2)Previous expansion in Basic medium: (i) Basic medium group: DMEM+10%FBS; (ii)Dex group: Basic medium + Dex+ β -GP+Ascorbic acid. Methods:Cell proliferation, ALP activity and mineralization were determined respectively. Expression evaluation of osteogenesis-related genes by real-time PCR

RESULTS: 1.HA significantly increased cell number ($P<0.05$) and there was no difference in Dex group($P>0.05$).2.There was no difference whether previous expansion with HA or not($P>0.05$). HA alone has no difference on ALP activity ($P>0.05$). HA combination with Dex increased ALP expression ($P<0.05$).3.HA combination with Dex increased Calcium deposit ($P<0.05$).4. Analysis of real time PCR result is ongoing.

CONCLUSION: Although analysis of real-time PCR results is ongoing, our preliminary results suggest that: 1.HA stimulates BMSC proliferation 2.HA combination with Dex can increase osteogenic differentiation

Optimizing viral and non-viral gene transfer methods for genetic modification of mesenchymal stem cells

Maik Stiehler (1,2), Mogens Duch (2), Tina Mygind (1), Haisheng Li (1), Michael Ulrich-Vinther (1), Charlotte Modin (2), Martin Lind (1), Finn S. Pedersen (2), Cody Bünger (1)

Orthopaedic Research Laboratory, Dept. of Orthopaedics E,
Aarhus University Hospital, (2)
Department of Molecular Biology, University of Aarhus

INTRODUCTION: Inadequate bone healing is a major challenge in many clinical situations. In this context, ex vivo cell-mediated gene therapy using mesenchymal stem cells (MSCs) over expressing osteogenic growth factors is an attractive therapeutic strategy. The aim of this study was to evaluate optimized viral and non-viral ex vivo gene delivery systems with respect to gene transfer efficiency, maintenance of transgene expression, and safety issues using primary porcine MSCs as target cells.

MATERIALS AND METHODS: Porcine MSCs were purified from bone marrow aspirates by Ficoll step gradient separation and polystyrene adherence. Vectors expressing eGFP reporter gene and BMP-2 gene were transferred to the cells by different non-viral methods and by use of AAV-mediated and retroviral gene delivery. Gene transfer efficiency was compared on the basis of eGFP expression.

RESULTS: Non-viral gene delivery methods resulted in transient eGFP expression by less than 2% of the cells. Using high titer AAV-based vector of up to 90% of the cells were transiently transduced. Retroviral gene delivery resulted in long-term transgene expression. A 26-fold increase in percentage of eGFP expressing cells and a 68-fold increase in mean fluorescence intensity was observed by centrifugation of retroviral vector onto the target cell layer. Furthermore, retrovirally BMP-2 transduced porcine MSCs demonstrated a significant increase in BMP-2 gene expression and showed increased osteogenic differentiation.

CONCLUSION: The low efficiency of non-viral gene delivery observed in this study demands further improvement of non-viral methods. AAV gene delivery is of interest for efficient, though transient, genetic modification of MSCs. Retroviral gene delivery is in particular attractive for strategies requiring extended transgene expression by MSCs.

Cobb angle measurement by Ortelius 800

Andreas Kappel og Søren Eiskjær
Ortopædkirurgisk afdeling, Aalborg Sygehus

INTRODUCTION: The Cobb angle is the gold standard for scoliosis evaluation. In recent years a major concern with repeated radiographic evaluation, has been the increased risk of malignancies, as reported by the U.S. scoliosis co-horte study.

Efforts has been made to develop non-radiographic methods for determination of spinal curve severity.

In vitro studies with the Ortelius 800 has shown good corellation to radiographic cobb angle.

MATERIAL AND METHODS: Ortelius 800 is a computer-interfaced electrogoniometer. Thoraco-lumbar processus spinosi is marked with a fingertip sensor, and the torsion is measured with a scoliometer, from these data the angle is estimated.

20 patient with adolescent idiopathic scoliosis were included. Cobb angle mesurement were done from radiographs. Four scanning with the Orte-lius 800 were performed alternately by two dedicated nurses.

RESULTS: Interexaminer correlation coefficient ranged from 0,67 to 0,84. Intraex-aminer correlation coefficient was 0,70. Mean difference between radi-graphic cobb angle measurement and the angle estimated by Ortelius 800 was 8,0 degrees (SD=6,5 degrees) with limits of agreement from - 26 to + 11 degrees.

CONCLUSION: In our clinic the Ortelius 800 does not provide sufficient precision to substitute radiographic cobb angle measurement.

Our results are similar to those published for another electrogoniometric device.

CT-Fluoro merge using Vectorvision and Stealth Station compared to fluoroscopy for insertion of pedicle screws using MIS techniques

*Carsten Perlick, Sandie Nielsen, Sten Rasmussen,
Jon Kaspersen, Søren Eiskjær*

Orthopedic and Radiografic Department Aalborg University Hospital

INTRODUKTION: Today a C-arm fluoroscope is present at every spine surgery. The fusion of intraoperative fluoroscopic images and preoperative CT-scanning images is providing useful information for minimal invasive spinal surgery. The purpose of the present study was to evaluate the accuracy of Brain Lab's Fluoro to CT module and Medtronic's Stealth Station CT-fluoro merge module for minimal invasive insertion of pedicle screws and to compare the accuracy of these guided systems to the conventional fluoroscopy technique.

MATERIAL AND METHODS: Simulated surgeries were performed in each of the three groups. Six screws were inserted per saw-bone, 10 saw-bones with conventional-, 8 with Brain Lab Vector Vision- and 8 with Medtronic Stealth Station-technique. Pre- and postoperative CT-scanning was used to assess the accuracy of the three methods.

RESULTS: In the conventional group 8 perforations were observed, in both computer-navigated groups occurred only 2 perforations per group. The fluoroscopy time was significantly less for the 2 computer guided systems.

CONCLUSION: "Fluoro to CT" gave the best results in central positioning of the screws in the pedicles, hereafter the conventional fluoroscopy and worst results gave Medtronic's "CT-fluoro-merge". Both CAOS systems used during the trial enabled safe and accurate screw placement for minimal invasive insertion of pedicle screws and reduce fluoroscopy time. But the use of navigation is combined with lengthening of OR-time and extra costs for soft- and hardware.



Bestyrelsen informerer:

Til de ledende overlæger

Etablering af faglig rådgivning i den kommende regionsdannelse, ortopædkirurgi:

Forberedelserne til den kommende regionsdannelse er i fuld gang og Dansk Ortopædisk Selskab har med nogen undren endnu ikke modtaget nogen henvendelse med henblik på lægefaglig rådgivning fra de myndigheder, som skal varetage den praktiske tilrettelæggelse af disse regioner. Selskabet er opmærksom på, at der i amterne finder en vis mødeaktivitet sted, og at fagpersoner også deltager i denne mødeaktivitet.

Dansk Ortopædisk Selskab har alligevel besluttet at stille sin faglige ekspertise til rådighed, og har derfor oprettet en række udvalg, således at "neutral" faglig rådgivning kan finde sted, dersom dette ønskes.

Da bestyrelsen er klar over, at de ledende overlæger på de ortopædkirurgiske afdelinger deltager i møderne omkring de kommende regioner, har vi fundet det hensigtsmæssigt at gøre opmærksom på disse udvalg, som er angivet nedenfor.

Selskabet har derfor med hjælp fra specialets fagområder udpeget en række fagpersoner, én fra hvert fagområde og fra hver region:

Dansk Børneortopædisk Selskab:

Overlæge Søren Harving, Aalborg

Overlæge Bjarne Møller-Madsen, Århus

Overlæge Niels Wisbech, Odense

Overlæge Steen Bach Christensen, København

Dansk Selskab for Artroskopisk Kirurgi og Sportstraumatologi

Overlæge Lars Blønd, Amtssygehuset i Gentofte

Overlæge Gunner Barfoed, Næstved

Overlæge Niels Mortensen, Odense

Overlæge Svend Erik Christiansen, Århus

Overlæge Gert Kristensen, Aalborg

Ryginteressegruppen i ortopædkirurgisk regi

Overlæge Karsten Thomsen, Odense

Professor Cody Bünger, Århus

Dansk Fod- og Ankelkirurgisk Selskab

Overlæge Preben Lass, Aalborg

Overlæge Frank Linde, Århus

Overlæge Johnny Frøkjær, Odense

Overlæge Hakon Kofoed, Frederiksberg

Dansk Selskab for Skulder-Albuekirurgi

Overlæge John Jakobsen, Aalborg

Overlæge Hans-Viggo Johannsen, Århus

Overlæge Lars Henrik Frich, Odense

Overlæge Gunnar Barfoed, Næstved

Overlæge Bo Sanderhoff Olsen, Herlev

Ortopædisk onkologi/Knogle- og bløddelstumor

Overlæge Gunnar Lausten, Herlev

Professor Bjarne Lund, Rigshospitalet

Overlæge Ole Skov, Odense

Overlæge Johnny Keller, Århus

Dansk Selskab for Håndkirurgi

Overlæge Bent Lange, Aalborg

Overlæge Karsten Krøner, Århus

Overlæge Henrik Schrøder, Odense

Overlæge Pernille Leicht, Rigshospitalet

Dansk Selskab for Hofte – & Knæalloplastik Kirurgi

Overlæge Jens-Erik Varmarken, Næstved

Overlæge Per Kjærsgaard-Andersen, Vejle

Overlæge Christian Pedersen, Aalborg Sygehus

Professor Kjeld Søballe, Aarhus Sygehus

Overlæge Henrik Schrøder, Rigshospitalet

Endvidere har specialets professorer stillet sig til rådighed i

Forskning- og uddannelsesspørgsmål:

Professor Bjarne Lund, Rigshospitalet

Professor Jes Bruun Lauritzen, Bispebjerg

Professor Søren Overgaard, Odense

Professor Cody Bünger, Århus

Professor Kjeld Søballe, Århus

Professor Ivan Hvid, Århus

Vi håber, disse personers velvillighed vil blive anvendt, og Dansk Ortopædisk Selskab formidler gerne kontakt til de pågældende.

Listen er også sendt til Sundhedsstyrelsen, Lægeforeningens formand, Formanden for Dansk Medicinsk Selskab samt Amtsborgmestrene og Amtsdirektørerne.

Venlig hilsen

*Søren Solgaard
Formand, DOS*

Referenceprogrammet om "Behandling af ligamentlæsioner i knæet" er nu blevet godkendt og vedtaget.

Efter nogle mindre korrektioner i teksten og anbefalingerne specielt vedrørende tromboseprofylakse har DOS bestyrelse på vegne af generalforsamlingen vedtaget og godkendt referenceprogrammet.

Hele teksten kan læses og downloades fra SAKS's hjemmeside www.saks.nu. under referenceprogrammer.

Den findes ligeledes som et link fra DOS's hjemmeside.

Referenceprogrammet er meget omfattende og dækker hele spekteret indenfor behandling af akutte og kroniske ligament skader.

Nogle af konklusionerne er ganske interessante og overraskende og skriftet vil være fin læsning både for nye og gamle ortopædkirurger.

God læsning

Red.



Yngre læger i inspektor-ordningen

Inspektorordningen har til formål at bidrage til kvalitets sikring og kvalitetsudvikling af den lægelige videreuddannelse på vores afdelinger. DOS har udpeget en række inspektorer (opdateret liste findes på Sundhedsstyrelsens hjemmeside). Ved hvert besøg deltager to speciallæger samt én yngre læge inspektor. Sundhedsstyrelsen udpeger hver inspektor.

For detaljeret gennemgang af ordningen samt information til inspektorerne henvises til Sundhedsstyrelsens hjemmeside.

<http://www.sst.dk/Uddannelse/Laeger/Inspektorordningen.aspx?lang=da>

Region Syd: Anders Jordy
(pr. 1.8.05 – 31.1.07, Ort.kir.afd., OUH)
E-mail: jordy@dadlnet.dk

Michael Brix
(Ort.kir.afd., Aabenraa Sgh.)
E-mail: michaelbrix@dadlnet.dk

Region Øst: Susanne Olesen Schaarup
(p.t. BBH, pr. 1.11.05-31.10.06 Nyk. Falster)
E-mail: suspost@hotmail.com

Per Gorm Jørgensen
(KAS Glostrup, pr. 1.11.05 H:S, Amager Hosp.)
E-mail: pergorm@oncable.dk

Region Nord: Ole Rahbek
(Silkeborg Sgh.)
E-mail: ole.rahbek@dadlnet.dk

Søren Kold
(Klin. Assistent, ort.kir.afd., AUH)
E-mail: s.kold@dadlnet.dk

DOT: Dansk Ortopædisk Traumeselskab's Generalforsamling d. 27. oktober fra kl. 9.00 - 11.00

Dagsorden:

1. Valg af Dirigent og Referent
2. Valg af nyt bestyrelsesmedlem.
Alle medlemmer kan stille op.
3. Formandens beretning samt
beretning fra diverse udvalg.
4. Indkomne forslag. Uddannelse
inden for traumatologien?
5. Fremlæggelse af regnskab og
budget til godkendelse.
6. Fastlæggelse af kontingent.
7. Evt

Efterfølgende vil der være følgende kliniske indslag med efterfølgende diskussion:

Behandling af subtrokantære femurfrakturer: Gør vi det rigtige?

Søren W Rasmussen



Dansk Selskab for Artroskopisk Kirurgi og Sportstraumatologi

Halvårsmøde

Torsdag d. 27. oktober 2005 kl. 09:30 - 12:00

Program

09:30 - 10:15 **ACL-Databasen** *Martin Lind*

10:15 - 10:30 **Kaffepause**

10:30 - 12:00 **Hvordan organiseres den artroskopiske kirurgi i de nye regioner?**

- **Indledning** *Gert Kristensen*

- **Fordele og ulemper ved ét stort**

center: *Magnus Forssblad,
Artrokliniken, Stockholm*

- **Fordele og ulemper ved flere små**

centre. *Marianne Backer/Amager -
Lars Blønd, Gentofte*

- **Diskussion**

- **Konsensus???????????????**

- Måske den vigtige diskussion de sidste 25 år. Mød talstærkt frem og giv jeres mening til kende

Med venlig hilsen

Bestyrelsen

,

Ryginteressegruppen:

**Holder møde torsdag den 27. oktober 2005
kl 10:00 - 12:00 Radisson SAS Scandinavia Hotel**

- Rygvagtsdækningen i Danmark
- Status Lumbale Diskusproteser
- Status Dansk Diskusbase
- Status DRKS
- DRKS's årsmøde i Århus 11. november
- Eventuelt

Karsten Thomsen

Dansk Fod- og Ankel Kirurgisk Selskab (DFAS)

**Holder møde Radisson SAS Scandinavia Hotel
torsdag den 27.10.05 kl. 10:00 - 12:00**

10-11 vil professor Kristian Steengaard-Pedersen holde foredrag om
"Moderne medicinsk behandling af reumatoid artrit"

Alle er velkomne

DFAS

DSHK Symposium

Torsdag den 27. oktober 2005 kl. 10:00 - 12:00
Radisson SAS Scandinavia Hotel, København

Moderator: Henrik M. Schrøder

1. kl. 10:00 - 10:30 **Dansk Knæalloplastikregister DKR**
ved Bjarne Lund
2. kl. 10:30 - 11:00 **Dansk Hoftealloplastikregister DHR**
ved Ulf Lucht
3. kl. 11:00 - 12:00 **Opgørelse over kontrolundersøgelser efter
hofte- og knæalloplastik i Danmark herunder
diskussion**
Per Kjærsgaard-Andersen

Jens-Erik Varmarken
DSHK

Møde i Dansk Børneortopædisk Selskab

torsdag den 27.10.05 kl. 10:30 til 12:00

Dagsorden:

Adam Hede: Nyt i foreningen siden sidste møde

Alle: Interessante tilfælde fra klinikken

Evt.

Med venlig hilsen

Sekretæren

Dansk Selskab for Håndkirurgi

Efterårsmøde og generalforsamling

Tid: Onsdag d. 26.10.05 kl. 13:00 - 18:30

Sted: Hansens Gamle Familiehavn, Pile Allé 10-12,
2000 Frederiksberg.

Program:

- 13:00 - 13:45 Steroid injektioner på hænder.
Professor, dr. med. Henning Bliddal,
Parker Institutet, Frederiksberg
- 14:00 - 14:45 Perifere nervelæsioner.
Overlæge Henrik Schrøder, Odense og
overlæge Bent Lange, Aalborg
- 15:00 - 15:30 Kaffe
- 15:30 - 16:30 Fremtiden for ergoterapi i kommunalt regi.
Sundhedsmediciner Jens Lauritsen og ledende
ergoterapeut Hanne K. Kristensen, Odense
- 16:30 - 17:00 Frie foredrag
- 17:15 - 18:30 Generalforsamling
- 19:00 Middag

Alle er velkomne, men tilmelding er nødvendig.
Mødedeltagelse kr. 150,-

Middag (incl. 1/2 flaske vin eller 1 fadøl/vand) kr. 300,-

Beløbet bedes indbetalt til Dansk Selskab for Håndkirurgi reg.nr.: 1551
kontonr.: 6881092 med angivelse af navn **senest 14.10.05.**

Abstract til frie foredrag mailes til sekretæren Karsten Krøner, E-mail:
karsten.kroener@dadlnet.dk **senest 14.10.05**

Dansk Selskab for Håndkirurgi
Dagsorden for generalforsamlingen
onsdag d. 26.10.2005 kl. 17:15 – 18:30:

Valg af dirigent

Fremlæggelse og godkendelse af bestyrelsens beretning

Fremlæggelse og godkendelse af revideret regnskab

Vedtagelse af kontingent for 2006

Optagelse af nye medlemmer

Valg af bestyrelsesmedlemmer

Valg af revisorer

Indkomne forslag

Eventuelt

Forslag i henhold til punkt 8 bedes fremsendt til formanden
henrik.schroeder@fyns-amt.dk **senest 14.10.05.**

Med venlig hilsen på bestyrelsens vegne

Pernille Leicht



**SAKS SYMPOSIUM
COMPLICATIONS IN
ARTHROSCOPIC SURGERY**

**NOVEMBER 3 - 4, 2005
COMWELL HOTEL ROSKILDE**

Igen i år afholder Dansk Selskab for Artroskopisk Kirurgi og Sports-traumatologi et symposium i Roskilde.

Under symposiet vil både hyppige og sjældne komplikationer blive gennemgået indenfor de forskellige topografiske områder. Yderligere vil forebyggelse og behandling af generelle komplikationer blive gennemgået

Symposiet henvender sig således til ortopædkirurger – både yngre og erfarne, som arbejder med artroskopisk kirurgi.

Organisationskomiteen anbefaler, at du klikker ind på SAKS's hjemmeside (www.saks.nu), hvor programmet samt øvrige oplysninger er beskrevet.

Symposiet foregår på engelsk:

Bemærk, at der i deltagerafgiften er inkluderet hotel og fortæring, herunder deltagelse i middagen samt en tur til Vikinge Båds Museet.

Faculty:

D. H. Johnson, Canada

N. van Dijk, Holland

Magnus Forssblad, Sverige

Ethan Wiesler, USA

Lars Borris, Danmark

Hans-Viggo Johannsen, Århus

Bjarne Larsen, Silkeborg, Denmark

Microbiologist

Michael Krogsgaard

Lars Blønd

Gert Kristensen

Svend Erik Christiansen

Others

Main topics:

Iatrogenous lesions to vital structures and peroperative lesions to articular structures.

Pitfalls and complications in arthroscopic surgery in the shoulder, knee and ankle joints.

Complications in endoscopic extraarticular surgery.

Legal consequences of complications (Patientklagenævn, Patientforsikringen)

Complications to general anaesthesia and the different types of regional analgesia

Postoperative intraarticular infection

Deep venous thrombosis

Arthrofibrosis – how to treat the stiff joint

Instrumental breakdown.

Implant failure.

Kontakt adresser:

Peter Lavard: bjpl@webspeed.dk

Svend Erik Christiansen: sec@dadlnet.dk

Symposium

Nyeste medicinske og kirurgiske aspekter ved hoftefrakturer

Tid: 5/11-2005, kl. 11.30 - 17.30

Sted: Auditoriet, Sygeplejerskolen, Bispebjerg Hospital.

Mødeleder: Professor, overlæge, dr. med. Peter Schwarz

Symposiet arrangeres af Dansk Knoglemedicinsk Selskab, men alle interesserede er velkomne.

Symposiet vil blandt andet omhandle:

- 1) Forebyggelse af hoftefrakturer (medicinsk m.m.)
- 2) Accelererede hoftefrakturprogrammer
- 3) Kirurgiske metoder
- 4) Ny grundforskning

Ud over de inviterede foredrag vil der være **foredragskonkurrence**. Alle kan deltage med foredrag om knoglerelaterede emner (ikke kun om hoftefrakturer).

Foredragene skal være af 8 minutters varighed + 2 minutter til besvarelse af spørgsmål. Vinderen vil modtage et rejselegat på kr. 5.000,-.

Abstracts til konkurrencen sendes til:

Henrik L. Jørgensen på HLJ@dadlnet.dk senest den 10/10-2005

(Hvis der tilmeldes for mange foredrag vil de bedste blive valgt ud til at deltage i konkurrencen)

Symposium (fortsat)

Nyeste medicinske og kirurgiske aspekter ved hoftefrakturer

Der vil være kaffe, frokost og efterfølgende reception og buffet. Af hensyn til bestilling af mad, er tilmelding til arrangementet nødvendig til: Henrik L. Jørgensen på HLJ@dadlnet.dk senest den 24/10-2005. (Max. deltagerantal 150 personer)

Der vil i tilknytning til symposiet være en udstilling fra forskellige firmaer med interesse for emnet.

Arrangerende komité:

Professor, overlæge, dr. med. Jes B. Lauritzen, Ortopædkirurgisk Afdeling, Bispebjerg Hospital

Konst. overlæge, ph. d. Henrik L. Jørgensen, Klinisk Biokemisk Afdeling, Bispebjerg Hospital

Professor overlæge, dr. med. Peter Schwarz, Geriatrisk/Reumatologisk afdeling, Amtssygehuset i Glostrup.

Håndkirurgisk dissektionskursus.

Mandag d. 19. og tirsdag d. 20. december 2005.

Sted: Panum Institutttet, Anatomisk sektion, Københavns Universitet, Blegdamsvej 3, 2200 Kbh. N

Kurset afholdes for 10. 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 inden for håndkirurgien samt svenske læger, håndkirurgisk uddannede eller i håndkirurgisk uddannelsesstilling.

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 kursist-dissektion 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. Torsdag aften middag.

Råder man over lup-briller til finere dissektions 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, SE 10 CME-point

Kursusafgift: 3.475 DKK

Tilmelding: Yderligere oplysning, anmodning om tilsendelse af kursusprogram og tilmelding fås ved henvendelse til sygeplejerske Nina Vendel. E-mail: n.vendel@c.dk

Tilmeldt/optaget på kurset når betalingen er modtaget.

Med venlig hilsen

Niels Søe Overlæge, Håndkirurgisk afsnit T1
KAS Gentofte; Tlf +45 3977 3962
nini@gentoftehosp.kbhamt.dk

Finn Bojsen-Møller Afdelingsleder, dr.med
Panum Institutttet Kbh.Universitet
F.moller@mai.ku.dk

Lars Dahlin Overlæge, dr.med. Ortopæd kir afd
Malmø; tlf: +46 40336769
Lars.Dahlin@hand.mas.lu.se

Nina Vendel Sygeplejerske, Håndkirurgisk afd
KAS Gentofte
n.vendel@c.dk

Dansk Fod- og Ankelkirurgisk Selskab

afholder

BASISKURSUS I FOD- OG ANKELKIRURGI

26. og 27. januar 2006

Kurset afholdes på DSB kursuscenter Knudshoved, Nyborg. Det endelige program vil først forligge i oktober måned. Der vil være ændringer i forhold til de tidligere basiskurser, men ikke så omfattende, så det kan anbefales som fortsættelseskursus. Der vil blive lagt mere vægt på workshop, med indlæring af teknikker på kunststofknogler.

Maks. Antal deltagere 30.

Kursusgebyr, der inkluderer ophold og måltider, udgør for medlemmer 2600,00 kr. for medlemmer af DFAS, og 2900,00 kr. for ikke medlemmer.

Tilmelding til selskabets sekretær på ekp@ledogknogler.dk
De tilmeldte vil modtage besked om endeligt program så snart det foreligger.



ISAKOS -course in Advanced Arthroscopic Surgery

Wednesday March 15th 2006

18:00 - 20:00 Registration

Thursday March 16th

08:00 - 08:30 Introduction, *T Wredmark*

09:00 - 12:00 Meniscal surgery, preservation or not. *U Jörgensen*

12:00 - 16:00 Lunch break

16:15 - 17:30 Live surgery by Satellite: ACL reconstruction.
Dr Bradly, Pittsburg

17:30 - 18:30 Workshop: ACL

Friday March 17th

08:00 - 12:00 Ankle and hind foot arthroscopy. Workshop.
J Karlsson, T Wredmark

12:00 - 16:00 Lunch break

16:30 - 18:00 Live surgery by Satellite: Arthroscopic stabilisation and
capsel plication. *Dr Nebelung, Düsseldorf*

18:00 - 19:00 Arthroscopic cuff surgery. *O Lundin*

Saturday March 18th

08:00 - 12:00 ACL and PCL-surgery, indications, graft selection and
reconstruction. Graft vitality-motion MR, PCL.
U Jörgensen, J Karlsson, T Wredmark, L Engebretsen

12:00 - 16:00 Lunch break

16:30 - 18:00 Treatment of chondral lesions in the knee.
M Brittberg, E Solheim

18:00 - 19:00 Workshops for meniscal surgery and cartilage surgery

Course dinner

Sunday March 19th

- 08:00 - 09:00 Hip arthroscopy: Indications, results and technique.
J Sandelin
- 09:00 - 10:00 PCL and multiple ligament surgery. L Engebretsen
- 11:00 - 12:00 General discussion and closure

ISAKOS -course in Advanced Arthroscopic Surgery

Under the patronage of ISAKOS and Nordic Orthopaedic Federation the Course in advanced arthroscopic surgery will be arranged in Hotel Tott in Åre, Sweden, March 15-19, 2006. The course is organised by Professor Torsten Wredmark at Department of Orthopaedics, Karolinska University Hospital and Department for Clinical Science, Intervention and technology, Karolinska Institutet.

The faculty consist of Prof. Lars Engebretsen, Oslo, Norway; Prof. Jón Karlsson, Gothenburg, Sweden; Associate Prof. Uffe Jörgensen, Copenhagen, Denmark; Associate Professor. Jerker Sandelin, Helsinki, Finland; Dr. Mats Brittberg, Kungälv, Sweden; Dr. Eirik Solheim, Trondheim, Norway; Dr. Olof Lundin, Gothenburg, Sweden.

Course director is Prof. Torsten Wredmark, Stockholm, Sweden.

Course language: English

Course fee includes single room with full pension. 10.845 SEK

Course registration is only electronic

<http://intranet.karolinskaeducation.ki.se/coursecatalog>

And can be fund at courses March 2006

Payment: When we have received your registration you will be sent an invoice on the course fee.

Deadline for course registration is January 15, 2006 and the applications will be handle on a “first come-first serve” basis, as there are a limited number of rooms.