BRUSSELS HAND/UPPER LIMB INTERNATIONAL SYMPOSIUM
21st year
Genval
Brussels, Belgium
January 18-19, 2013

CURRENT TRENDS AND INNOVATIONS IN UPPER EXTREMITY ARTHROPLASTY

PROGRAM

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21st BRUSSELS HAND/UPPER LIMB INTERNATIONAL SYMPOSIUM

Current Trends and Innovations in Upper Extremity Arthroplasty

January 18-19, 2013

CHÂTEAU DU LAC
GENVAL-BRUSSELS

DIRECTOR:

F. SCHUIND

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INTRODUCTION TO THE SYMPOSIUM

The 21st edition of the annual Brussels/Genval Symposium will take place Friday January 18 and Saturday January 19, 2013. The Symposium is dedicated to a specific interdisciplinary topic involving the hand and the upper limb. The 21st edition will cover Upper Extremity Arthroplasty. The Château du Lac at Genval will again be the beautiful venue of this symposium. The previous meetings have been attended by 80-150 participants, from 15-25 different countries. In 1995, the topic was already on upper extremity joint replacement; this symposium was sponsored by the European Society of Biomechanics, and this resulted in the publication of the book “Recent Advances in Upper Extremity Arthroplasty” (K.N. An and F. Schuind, editors – World Scientific, Singapore, 1997). For the last two decades, spectacular progress has been made in upper extremity joint replacement. Basic biomechanical knowledge now allows us to better apprehend the forces applied to the artificial joints, possibly influencing their durability.

We also have a better understanding of the kinematics after various upper extremity joint replacements. New materials, like pyrocarbons, have appeared, leading to a revival of the resection-interposition-arthroplasty concept. New implants have been designed, for example for distal radio-ulnar joint replacement. Improved anaesthesiology allows prolonged postoperative pain control. New surgical techniques have been developed, for example arthroscopic joint osteoplasty in early osteoarthritis, preserving the joint while removing the impinging osteophytes; at a later stage, it is possible to perform arthroscopic resection-arthroplasty, for example trapeziectomy or even proximal carpal row resection, without the morbidity of an arthrotomy. As at the hip, muscle-sparing approaches allow better postoperative functional results. Resurfacing implants have been developed for various upper extremity joints. Navigation techniques have limited but interesting applications at the upper limb. Better methods of rehabilitation and of evaluation of the results have been proposed. In parallel, there have been as well progresses in conservative techniques; for example, for trapezio-metacarpal osteoarthrosis, the techniques of ligamentoplasty and of osteotomy have been refined; better bone fixation methods are now available for complex proximal or distal humerus fractures.

The indications of arthroplasty have in parallel markedly evolved. Rheumatoid arthritic joint destructions have become rare, owing to the progresses in disease-modifying anti-rheumatic drugs. Reversed shoulder prostheses, initially reserved for the treatment of cuff-tear arthropathy, are quite frequently implanted in com-minuted proximal humeral fractures. There is as well a tendency to treat comminuted distal humeral fractures by hemiarthroplasty or linked total elbow arthroplasty, at least in elderly patients. Resurfacing implants are mostly used for osteonecrosis indications. Radial head excision is now rarely performed after a comminuted fracture, in favour of monopolar or bipolar radial head hemiarthroplasty, and total capituloradial prostheses are now available when the destruction involves both sides of the joint. Better total wrist prosthetic designs may very soon enlarge the indications of joint replacement at this level. Silastic implants are less frequently used than previously, except at the fingers. Vascularized joint transfers from the foot allow sophisticated reconstructions in selected indications. The indications of denervation, of allograft joint replacement, and of arthrodesis have become infrequent - but arthrodesis remains the treatment of choice of thumb metacarpophalangeal joint arthritis. We miss in general evidence-based trials: comparative prospective assays are lacking, to evaluate the place of each treatment option.

Due to the rapidly growing number of upper extremity joint replacements, complications have become more frequent, and salvages are sometimes quite difficult. Like at the lower extremity, peri-prosthetic fractures do occur in elderly patients. Loosening is still a major
problem after shoulder (glenoid component), elbow and wrist replacement. Prosthetic infections are also seen; the risk is especially high at the elbow, where the joint is close to the poorly vascularized skin, especially in posttraumatic situations. Propiono-bacterium acnes infections seem to affect especially the shoulder. At the lower extremity, the current recommendations of treatment are lavage for early infection, and one-stage or two-stage exchange for late infections, to eradicate the persistent biofilm. Are these guidelines applicable at the upper extremity? Arthroplasty can be especially challenging after en-bloc resection of an upper extremity tumour, as the possibilities of reconstruction using a custom-made megaprosthesis are quite limited, as compared to the hip and knee. The solution is sometimes the combination of an allograft or of a vascularized autograft, with a conventional prosthesis.

The primary goals of the Brussels/Genval annual upper limb Symposium, gathering together in a firstclass resort close to Brussels experts from different fields (the previous Symposia have been attended by orthopaedic, plastic, paediatric and general surgeons, anatomists, physiotherapists, prosthetists, rheumatologists, anaesthesiologists, pain specialists, radiologists, nuclear medicine scientists, immunologists, pathologists, engineers and basic scientists), are to promote the exchange of ideas, to establish guidelines on a consensual basis, and to foster collaborative investigations among various specialists.

SPECIFIC AIMS

To summarize the current progresses in upper extremity arthroplasty, from the shoulder to the fingers (including non-prosthetic arthroplastic reconstructions); to evaluate new concepts, surgical techniques, adapted physiotherapy and evaluation of the results;

- To discuss basic biomechanical research;
- To assess - also in the patient’s perspectives - the innovative techniques, the clinical results and the complications;
- To formulate on these bases recommendations to the medical community;
- To discuss unsolved problems and possible solutions;
- To explore future directions of research.

F. Schuind
Erasme University Hospital, Brussels, Belgium
ORGANIZING COMMITTEE

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SCIENTIFIC PROGRAMME

FRIDAY, JANUARY 18, 2013

07.30 - 17.00 Registration

08.10 – 10.20 SESSION 1: AN INTRODUCTION TO THE SYMPOSIUM (1)

Moderators: K. Yamaguchi, J. Bahm

08.10 Opening Address
F. Schuind (Brussels, Belgium)

08.15 001 Aetiology and Treatment of Osteonecrosis.
V. Gangji (Brussels, Belgium)

08.30 002 Management of Early Rheumatoid Arthritis
P. Verschueren (Leuven, Belgium)

08.45 003 Biomechanics of GlenoHumeral OsteoArthrosis
P. Blaimont, A. Taheri (Brussels, Belgium)

09.00 Discussion

09.15 004 Life Prediction and Structural Improvements of Prosthetic Implants with
Finite Elements Method: Application to a Trapeziometacarpal Joint
Prosthesis
D. Farhat, G. Guerlement, C. Engel, P. Ledoux (Mons, Belgium)

09.30 Discussion

09.35 005 Update on the Treatment of Shoulder Fractures
C.E. Thélu (Nice, France)

09.55 006 Primary Total Elbow Arthroplasty for Distal Humerus Fractures. Only
in Elderly? Or?
R. van Riet (Deurne, Brussels, Belgium)

10.10 Discussion

10.20 Coffee break and Visit of the Commercial Exhibition
10.40 – 13.00  SESSION 2: AN INTRODUCTION TO THE SYMPOSIUM (2)

Moderator: Ch. Thélu

10.40  007  The Use of 3D Planning and Patient Specific Guides and Implants for Upper Extremity Reconstruction
F. Verstreken (Deurne, Belgium)

10.55  Discussion

11.00  008  Prostheses and Allografts for Reconstruction of Massive Loss of Substance of the Elbow Joint
O. Barbier, X. Libouton, C. Delloye (Brussels, Belgium)

11.15  Discussion

11.20  009  Tumors and Bone Defect Reconstruction of the Upper Extremity
M. Gebhart (Brussels, Belgium)

11.35  Discussion

11.40  010  Management of Infected Upper Extremity Arthroplasty
J. Stuyck, P. Debeer (Leuven, Belgium)

11.55  011  Revisions in Shoulder Arthroplasty
K. Yamaguchi (Saint-Louis, MI, USA)

12.15  Discussion

12.25  012  Value of the Functional Scores in Aged Individuals
D. Mouraux, Ch. Robert, C. Bourdon, F. Schuind (Brussels, Belgium)

12.40  Discussion

12.45  013  Painful Arthroplasty due to Postoperative Neuroma
J. Bahm (Brussels, Belgium and Aachen, Germany)

12.55  Discussion

13.00  Lunch and Visit of the Commercial Exhibition

14.10 - 14.30  SESSION 3: PAIN CONTROL FOR UPPER EXTREMITY ARTHROPLASTY

Moderators: D. Mouraux, J.P. Moermans

14.10  014  Peri- and Postoperative Pain Relief for Upper Limb Surgery
E. Hendrickx (Deurne, Belgium)

14.25  Discussion
14.30 – 15.50  **SESSION 4: SHOULDER ARTHROPLASTY AND ALTERNATIVES (1)**
Moderators: Ch. Thélù, L. De Wilde

14.30 015  **3D GlenoHumeral Relationship in Shoulder Arthropathy**
A. Van Tongel, E. Beuckelaers, M. Jacxsens, J. Verstraeten, H. De Backer, L. De Wilde (Ghent, Belgium)

14.45  Discussion

14.50 016  **Biomechanics of the Reverse Total Shoulder Prosthesis**
L. De Wilde (Ghent, Belgium)

15.05  Discussion

15.10 017  **Total Shoulder Arthroplasty in Cases of Glenoid Deficiency**
K. Yamaguchi (Saint-Louis, MI, USA)

15.30 018  **Glenoid Bone Grafting in Revision Shoulder Arthroplasty**
O. Verborgt, G. Declercq (Deurne and Antwerp, Belgium)

15.45  Discussion

15.50  Coffee break and Visit of the Commercial Exhibition

16.20 – 17.25  **SESSION 5: SHOULDER ARTHROPLASTY AND ALTERNATIVES (2)**
Moderators: K. Yamaguchi, K. Cermak

16.20 019  **Bony Increased-offset Reversed Shoulder Arthroplasty. Minimizing Scapular Impingement While Maximizing Glenoid Fixation**
Ch. Thélù, P. Boileau, G. Moineau, Y. Roussanne, K. O’Shea (Nice, France)

16.40 020  **Patient Specific Instrumentation for Glenoid Implantation during Shoulder Arthroplasty**
O. Verborgt, G. Declercq (Deurne and Antwerp, Belgium)

16.50  Discussion

17.00 021  **Outcomes of Reversed Total Shoulder Arthroplasty with the Anatomical Shoulder Inverse/Reverse Prosthesis. Preliminary Results at Two-Year Follow-Up of an International Multicenter Study**
O. Verborgt (Deurne, Belgium)

17.20  Discussion

17.25 – 18.00  **SESSION 6: SHOULDER ARTHROPLASTY - ROUND TABLE AND CASE PRESENTATIONS**
Moderators: O. Verborgt, A. Van Tongel

18.30 – 23.00  Social Program: Guided visit Royal Museum for Central Africa & Dinner
SATURDAY, JANUARY 19, 2013

08.30 – 09.55  SESSION 7: ELBOW ARTHROPLASTY AND ALTERNATIVES (1)

Moderators: K. Yamaguchi, R. van Riet

08.30 022  Linked, Unlinked or Convertible Total Elbow Arthroplasty
K. Yamaguchi (Saint-Louis, MI, USA)

08.50  Discussion

08.55 023  Traumatic Indications of Total Elbow Arthroplasty
M. Mizher, W. El kazzi, F. Schuind (Brussels, Belgium)

09.02 024  Distal Humerus Hemiarthroplasty. A Report of Six Cases
A. Heijink, D. Eygendaal (Amsterdam, Breda, The Netherlands)

09.09  Discussion

09.15 025  Humeral Component Insertion Technique for Cases of Distal Humeral
Large Bone Defects in Total Elbow Arthroplasty
R. Ikeguchi, S. Matsumoto, H. Takeuchi, Y. Okutani, T. Yoshikawa,
M. Kanamori, H. Kyo, G. Kimura, B. Otsuki, E. Onishi, K. Ikawi, K. Kawanabe
(Kobe, Japan)

09.22 026  Reconstruction of the Elbow Joint after Blast Injury with Arthroplasty
using a Custom Made Total Elbow Prosthesis connecting Humerus,
Radius and Ulna. A Case Report
A. Franke, S. Hentsch, M. Johann, E. Kollig (Koblenz, Germany)

09.29  Discussion

09.35 027  Revision Elbow Arthroplasty. Long Term Resurfacing Results, Staging of
Metallosis and Revision Technique
I. Degreef, L. De Smet (Leuven, Belgium)

09.50  Discussion

09.55  Coffee-break and Visit of the Commercial Exhibition

10.15 – 11.20  SESSION 8: ELBOW ARTHROPLASTY AND ALTERNATIVES (2)

Moderators: I. Degreef, R. van Riet

10.15 028  Radial Head: from Biomechanics to Prosthetic Replacement. Where are
we now?
E. Van Hoecke, F. Van Glabbeek (Antwerp, Belgium)

10.30 029  Elbow Biomechanics after Radial Head HemiArthroplasty
F. Mounghono, W. El kazzi, R. van Riet, V. Feipel, M. Rooze, F. Schuind
10.37 Discussion

A. Heijink, B.F. Morrey, D. Eygendaal (Amsterdam, Breda, The Netherlands and Rochester, MN, USA)

10.52 Discussion

10.55 031 Possibilities of Elbow Denervation

11.02 Discussion

11.05 032 Elbow Arthrodesis as a Salvage Procedure for Failed Total Elbow Arthroplasty
R. van Riet (Deurne, Brussels, Belgium)

11.15 Discussion

11.20 – 12.30 SESSION 9: WRIST ARTHROPLASTY AND ALTERNATIVES
Moderators: O. Barbier, P. Ledoux

11.20 033 Our Results of Wrist Arthroplasty versus Arthrodesis. Short to Mid-Term Results in a Series of Thirteen Cases
M. Van Nuffel, L. De Smet, I. Degreef (Leuven, Belgium)

11.35 034 The Re-Motion Total Wrist Arthroplasty. Experience from a Registry Based, Multicentre Study
M.E.H. Boeckstyns, G. Herzberg (Hellerup, Denmark and Lyon, France)

11.42 035 Uncemented Total Wrist Arthroplasty. Long Term Results
A.P.C. Weiss (Providence, RI, USA)

11.49 Discussion

W. El kazzi, J. Bahm, F. Schuind (Brussels, Belgium)

12.05 Discussion

12.10 037 Scheker Arthroplasty. Preliminary Results of Linked DRUJ Resurfacing in a Series of 15 Cases
I. Degreef, L. De Smet (Leuven, Belgium)

12.25 Discussion

12.30 Lunch and Visit of the Commercial Exhibition
13.30 – 16.20 SESSION 10: TRAPEZIO-METACARPAL ARTHROPLASTY AND ALTERNATIVES

Moderators: F. Verstreken, F. Stockmans

13.30 038 Thumb CMC Arthritis Update. Lessons Learned from Big Joints
A.L. Ladd, E. Hagert, J. Lee, A. Zhang, S. Van Nortwick (Stanford, CA, USA)

13.37 Discussion

13.40 039 PathoClinical Correlations between Location and Size of Joint Degeneration and Preoperative Imaging
E. Moest, E. Clegg, P. Ledoux (Mons, Belgium)

13.47 040 Analyzing Trapezial Trabecular Microstructure using Flat-Panel Volume CT
A.L. Ladd, M. Pouliot, R. Fahrig, C. Barr, R. Cheng (Stanford, CA, USA)

13.54 Discussion

14.00 041 The TrapezioMetacarpal Ligaments: Importance of their Anatomy in choosing a Surgical Approach
P. D’Agostino, F. Kerkhof, M. Shahapbour, F. Stockmans, J.P. Moermans, E. Vereecke (Kortrijk and Brussels, Belgium)

14.07 Discussion

14.10 042 The Unavoidable Shortening of the Thumb after Trapeziectomy
S. De Smet, J.P. Moermans (Brussels, Belgium)

14.25 Discussion

14.30 043 Suture Suspension Thumb CarpoMetacarpal Arthroplasty
A.P. Weiss (Providence, RI, USA)

14.37 Discussion

14.40 044 Trapezio-Metacarpal Joint Replacement with ARPE and MAIA Implants. A Long Term Review of 159 implants
S. Brondello, E. Clegg, J.P. Moermans (Brussels, Belgium)

14.47 045 Clinical and Radiological Outcomes of the Ivory® Arthroplasty for Trapezio-Metacarpal Joint Osteoarthritis with a Minimum of Five Years of Follow-Up: A Prospective Single-Center Cohort Study
J.F. Goubau, C.K. Goorens, P. Van Hoonacker, D. Kerckhove, B. Berghs, T. Scheerlinck (Brugge, Brussels, Belgium)

14.54 046 A minimum of Five-Year Follow-Up Results of the ARPE Prosthesis for Painful Degenerative Trapeziometacarpal Joint
F. Stockmans, J. Barth, J. Van Haecke, M. Dezillie (Kortrijk, Belgium)

15.01 Discussion
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<td>Sonographic Evaluation of the Interposed Tissue after Trapeziectomy and First Metacarpal Suspension – Minimum Two Years Follow-Up</td>
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<td>Long Term Outcome of Trapeziectomy with Ligament Reconstruction / Tendon Interposition versus Thumb Basal Joint Prosthesis</td>
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<td>Trapeziometacarpal Osteoarthritis: Arthroplasty or Trapeziectomy?</td>
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<td>Treatment of De Quervain's Disease: Decompression of the First Dorsal Extensor Compartment of the Wrist by Tendinous Resection and Transfert</td>
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<td>Joint Problems in Congenital Disorders of the Hand</td>
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<td>Swanson Silastic Implant Replacement of Arthritic Finger Joints. A Retrospective Review of 51 Prostheses</td>
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Alternative to Distal Interphalangeal Joint Arthrodesis: A Report of 100 Cases using a Shape-Memory Intramedullary Staple
R. Metasa, C. Zirak, B. Amara (Brussels, Belgium and Montpellier, France)

Discussion

SESSION 12: ELBOW, WRIST AND HAND ARTHROPLASTY - ROUND TABLE AND CASE PRESENTATIONS – SUMMARY AND CONCLUSIONS

Moderators: F. Schuind, R. van Riet

Ten Questions to the Floor and the Faculty

Summary and Conclusions
F. Schuind, J. Bahm, K. Cermak, R. van Riet (Brussels, Deurne, Belgium)

End of Symposium