Preliminary Program

BRUSSELS INTERNATIONAL SYMPOSIUM

ADVANCES IN UPPER EXTREMITY
OSTEOSYNTHESIS

A meeting sponsored by the
European Society of Biomechanics

Genval/Brussels, Belgium
April 17-18, 1998

Pre-Symposium Course on
Upper Extremity External Fixation:
April 16, 1998

SECRETARIAT
F. Schuind
Dept. of Orthopaedics
Erasmus University Hospital
Route de Lennik 808, B-1070 Brussels, Belgium
Tel. 32/2/555 36 91 - 555 68 44 - Fax 32/2/520 35 56

MEETING PLACE
Château du Lac
Avenue du Lac, B-1332 Genval, Belgium
Tél. 32/2/655 71 11 - Fax 32/2/655 74 44
AIMS AND FORMAT

Since Albin Lambotte's pioneer work in Osteosynthesis (a term that he created in 1907 in replacement of the until-then used words "bony suture"), including the original development of numerous techniques of external and internal fixation, the ancient arts of traction or cast and prolonged immobilization gave way to modern fracture fixation techniques and early motion.

The last 3 decades have been characterized by the continuous improvement of the techniques of Osteosynthesis, and by the concomitant development of microsurgery, making it possible to save limbs and to restore normal function in cases which until recently would have been treated by amputation.

Osteosynthesis presents specific problems at the Upper Extremity. Due to the particular shape and size of the upper extremity bones, many techniques in use at the lower limb are not applicable. Because of the close vicinity of important neurovascular and tendinous structures, the insertion of the osteosynthesis implant frequently presents a challenge, both to the surgeon and to selection of the best fixation device. Many epiphysial fractures affect the subchondral bone, at the proximal or distal humerus or the distal radius, making classical techniques of osteosynthesis controversial or inapplicable. Even a moderate final limitation of joint motion may represent to the patient a major handicap. Nonunions are not exceptional at the upper extremity, possibly as a consequence of specific loading conditions.

The osteosynthesis techniques are still evolving. New treatment modalities develop at a rapid pace, but frequently lack serious biomechanical and clinical bases. While much knowledge has accumulated on healing of compact bone, few research has focused on the healing of articular fractures, frequent at the upper extremity. The primary goal of this Symposium, that will be held in the country of pioneers as Lambotte and Danis, is to summarize the current scientific knowledge on upper extremity fractures and nonunions, and the experience with the various techniques of internal and external fixation.

The symposium is sponsored by the European Society of Biomechanics, as close cooperation with basic scientists is essential for optimal fracture treatment and implant design. The second goal of this symposium is to promote the exchange of ideas and innovation, to foster collaborative investigations among clinicians, manufacturers, engineers and other scientists involved with the problems of upper extremity Osteosynthesis, from the clavicle to the finger.

SPECIFIC AIMS

1. To summarize current scientific knowledge on upper extremity Osteosynthesis,
2. To discuss unsolved clinical problems and potential solutions based on current scientific knowledge,
3. To review new implant designs, and
4. To explore future directions of investigation.

ORGANIZING COMMITTEE

Y. ANDRIANNE
M. HINSENKAMP
J.J. ROMBOUTS

F. BURNY
J. QUINTIN
F. SCHUIND

INTERNATIONAL FACULTY

Y. ANDRIANNE (Belgium) G. ASCHE (Germany)
J. BREMEN (Belgium) P. BROOS (Belgium)
F. BURNSKY (Belgium) C.M. COURT-BROWN (U.K.)
M. HINSENKAMP (Belgium) J.P. METAIZEAU (France)
J. QUINTIN (Belgium) P. ROOKKANEN (Finland)
J.J. ROMBOOUTS (Belgium) E. SCHNEIDER (Switzerland)
F. SCHUIND (Belgium)

PRE-SYMPOSIUM COURSE ON
UPPER EXTREMITY EXTERNAL FIXATION

On Thursday, April 16, a pre-symposium course will be organized in Erasme University Hospital on Upper Extremity External Fixation, under the direction of F. Burny, MD, PhD. This course is made possible by an educational grant provided by Howmedica.

Guest Speakers:
G. Asche (Freudenstadt, Germany), F. Forriol (Pamplona, Spain), J. Mata (Geneva, Switzerland), M. Nyfeier (Geneva, Switzerland).

Information on the Pre-Symposium Course:
M. Donkerwolcke,
Dept. of Orthopaedics and Traumatology,
808 Route de Lennik, B-1070 Brussels.
Tel. : 32/2/555 36 44 - Fax : 32/2/520 35 56.
Daily Program at a Glance

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Final Program

Thursday, April 16, 1998

16.00-19.00 Registration
18.30-20.00 Welcome Reception
(sponsored by Howmedica)

Friday, April 17, 1998

08.00 Registration, Coffee and Croissants
09.00-11.35 Session 1: An Introduction to Upper Extremity Osteosynthesis – General Concepts, New Implants
(Moderators: F. Burny, E. Schneider)
09.00 Opening Address
F. Schuind (Brussels, Belgium)
09.10 Upper Extremity External Fixation: Biomechanics, Clinical Applications, New Concepts
F. Burny (Brussels, Belgium)
09.30 Ilizarov External Fixation for Treatment of Upper Extremity Fractures and for Lengthening
V.I. Shevtsov (Korgan, Russia)
09.50 Bioabsorbable Devices in Upper Extremity Osteosynthesis
10.10 Concept and Performance of the Point Contact Fixator in Forearm Fractures
E. Schneider, A. Remiger, C. Hauke, K. Ito, S. Tepic, S.M. Perren (Davos, Switzerland)
10.30 Preliminary Results of Osteosynthesis of Fractures of the Upper Limb with the SurfFix Plate
P. Surer (Chateaubriant, France)
10.40 Open Fractures of the Humerus and Forearm Treated by External and/or Internal Fixation
G. Mandellos, H. Kotsovolos, G. Mitsionis, N.I. Bali, T.H. Xenakis (Ioannina, Greece)
10.50 Surgical Treatment of Pathological Fractures of the Humerus
P. Kitsoulis, H. Zalavras, A. Mavrodontitis (Ioannina, Greece)
11.00  Treatment of Fractures of the Upper Limb in Children by Centromedullary Pinning  
J.P. Metaizeau, O. Klein, F. Mc Leod  
(Metz, France)

11.20  Discussion

11.35  Coffee-break and visit of the posters and commercial exhibition

12.05-12.45  Session 2: Shoulder  
(Moderators: J. Quintin, P. Rokkanen)

12.05  External Fixation of the Clavicle. A Review of 40 Cases  
F.L. Burny, F. Schuind, M. Donkerwolcke,  
F. Mouart (Brussels, Belgium)

12.15  Operative Treatment of Fractures and Fracture/Dislocations of the Proximal Humerus  
M. Hantes, U. Moebius, A. Georgoulis  
(Ionannina, Greece)

12.25  Osteosynthesis with the Milch Plate of Displaced Proximal Humeral Fractures in Adults  
P. Van Daele, P. Vorlat, L. De Wilde, R. Verdonk  
(Ghent, Belgium)

12.35  Discussion

12.45  Lunch

14.00-16.20  Session 3: Humerus  
(Moderators: M. Hinsenkamp, C.M. Court-Brown)

14.00  The Surgical Treatment of Fractures of the Humeral Shaft. Indications, Limitations and Pitfalls  
P. Broos (Leuven, Belgium)

14.20  Discussion

14.30  Biomechanical Comparison of Two Interlocked Intramedullary Nails for Humeral Shaft Fractures  
J. Blum, H. Machemer, U. Schlegel, D. Wahl,  
F. Baumgart, P.M. Rommens (Mainz, Germany and Davos, Switzerland)

14.40  Treatment of Humerus Fractures by Marchetti Nailing  
C. Chantelot, C. Feugas, K. Elkholti, C. Fontaine,  
Y. Butin (Lille, Arras, France)

14.50  Humeral Fractures Treated by Flexible Non-Reamed Retrograde Nailing  
M. Vanneste, P. Putzeys, Th. Authom, G. de Brouckère (Baudour, Belgium)

15.00  Clinical Experience with Three Different Retrograde Interlocking Nailing Systems for Humeral Shaft Fractures  
J. Blum, P.M. Rommens (Mainz, Germany)

15.10  Discussion

15.20  External Fixation of the Humerus  
F.L. Burny, M. Donkerwolcke, F. Mouart,  
J.G. Tsiagadigui (Brussels, Belgium)

15.30  Use of Mini External Fixator in the Treatment of Humerus Shaft Fractures  
A. Petrulis, S. Pranckevicius, L. Vaickevicius,  
A. Petravicius (Kaunas, Lithuania)

16.00  Use of Biocompatible Osteoconductive Polymers (BOP) for Operative Treatment of Benign Tumors, Pathologic Fractures and Nonunions of Humerus  
A. Petravicius, S. Pranckevicius, A. Petrulis,  
L. Vaickevicius (Kaunas, Lithuania)

16.10  Discussion

16.20  Coffee-break and visit of the posters and commercial exhibition

16.50-17.55  Session 4: Elbow  
(Moderators: J. Bremen, P. Broos)

16.50  External Fixation of the Elbow  
F.L. Burny, F. Schuind, Y. Tapia, M. Donkerwolcke,  
F. Mouart (Brussels, Belgium)

17.00  External Fixation for Elbow Injuries  
F. Esling, S. Rigal, P. Tripon, C. Savornin  
(St Mandé, France)

17.10  Discussion

17.20  Radial Head Fractures: Osteosynthesis Versus Resection—Two Multicentre Studies  
F. Schuind (Brussels, Belgium)

17.35  Internal Fixation of Radial Head Fractures  
S. Kostis, J. Kostas, A. Beris (Ioannina, Greece)

17.45  Discussion

17.55-18.30  Session 5: Case Reports to Challenge the Experts, Discussion of the Posters and Panel Discussion on Osteosynthesis of Shoulder,
Coffee-break and visit of the posters and commercial exhibition

Session 8: Wrist
(Moderators: F. Schuind, G. Asche)

11.00
An Experimental Approach to Distal Radius Fractures
D. Stoffelen, P. Broos (Leuven, Belgium)

11.10
The Cooney Versus Gartland and Welley Scoring Systems in the Evaluation of Distal Radius Fractures
D. Stoffelen, P. Broos (Leuven, Belgium)

11.15
Discussion

Management of Displaced Intra-Articular Fractures of the Distal Radius
N.I. Balis, I. Resis, K.N. Malizos (Ioannina, Greece)

11.35
Indications for the Treatment of Wrist Fractures with Rigid and Dynamic External Fixation
G. Asche (Freudenstadt, Germany)

External Fixation of the Wrist. A Review of 500 Cases
F.L. Burny, M. Donkerwolcke, F. Moulart, F. Schuind (Brussels, Belgium)

12.05
What Type of External Fixation is Appropriate for Distal Radial Fractures?
C.M. Court-Brown (Edinburgh, U.K.)

12.20
Pseudoaneurysm of the Ulnar Artery after Treatment of Colles Fracture by External Fixation
M. Vancabeke, B. Heiderich, B. Bellens, P. Putz (Brussels, Belgium)

12.40
Discussion
Lunch

Session 9: Scaphoid
(Moderators: F. Schuind, G. Asche)

13.20
Prognostic Factors in the Treatment of Scaphoid Nonunions

Scaphoid Nonunion: Operative Treatment with Bone Grafting and Herbert Screw
A.E. Beris, M.D. Kirou (Ioannina, Greece)
13.45 Discussion

13.55-15.25 **Session 10 : Hand**
(Moderators : F. Schuind, G. Asche)

13.55 **Interval Approach for the Analysis of Imprecisely Defined Parts in the Hand Structure**
R. Targowski (Mons, Belgium)

14.05 **Application Model of Goal Oriented Movement Synthesis of the Human Finger**
K.J. Van Zwieten, P.L. Lippens, V.A. Sholukha, A.V. Zinkovsky, W. Duyvendak (Diepenbeek, Hasselt, Belgium and St. Petersburg, Russia)

14.15 Discussion

14.25 **External Minifixation**
F. Schuind, F.L. Burny (Brussels, Belgium)

14.40 **Our Experience with New External Fixators in Hand Surgery**
M. Kulkarni, A. Kulkarni, B. Kanaji, R.E. Rana, S.R. Tambwekar, B.B. Joshi (Slough, United Kingdom)

14.50 Discussion

15.00 **Implantable Miniature Hardware for Metacarpal and Phalangeal Fracture Fixation**
P. Kitsoulis, H. Zalavras, K.N. Malizos (Ioannina, Greece)

15.10 **Fractures of the Head of Metacarpal Bones**
L. Simeonov, P. Tivchev (Sofia, Pavlova, Bulgaria)

15.15 Discussion

15.25-16.20 **Session 11 : Panel Discussion of Treatment of Fractures of the Pediatric Elbow, of Wrist and Hand – Discussion of Posters and Case Reports – Ten Questions to the Floor and the Faculty**
(Moderators : F. Schuind, F.L. Burny)

16.20-16.30 **Summary and Conclusions**
F. Schuind (Brussels, Belgium)

16.30-17.30 **Health Break**
(sports or access to the center of fitness)

17.30 **Social Program : Visit of the Waterloo battlefield, of the farm of the Caillou, and of the Wellington Museum in Waterloo and Cocktail at the Museum**

20.00 **Banquet in the lovely village of Ohain (optional)**

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**Posters :**

- **Treatment of Humerus Fractures by Orthofix External Fixation**
  C. Chantelot, A. Besson, C. Fontaine, H. Migaud, A. Duquennoy (Lille, France)

- **Mechanical Properties of the Lunate Bone with Different Trabecular Microstructure**
  R. Targowski (Mons, Belgium)

- **Surgical Management of Type III Acromioclavicular Dislocation**
  C.M. Arnaoutoglou, D. Theodorou, P.N. Soucaicos (Ioannina, Greece)

- **Persistent Nonunions of the Proximal Scaphoid : Treatment with Vascularized Bone Graft**
  K.N. Malizos, M.D. Kirou, P.N. Soucaicos (Ioannina, Greece)

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**Congress Information**

**Venue**
Château du Lac, avenue du Lac
B-1332 Genval, Belgium
Tel. : + 32 2 655 71 11 - Fax + 32 2 655 74 44.

**Language**
English.

**Information for Presenters**
The allocated time of presentation should be strictly respected (10 min. for most free papers). Slides : single or double projections are available (Kodak carrousels). Use 35 mm slides in 50 x 50 mm plastic mount. Overhead projection is also available.
The preview room is open on April 17 from 07.00 to 19.00, and on April 18 from 07.00 to 17.00. Each presenter should check with the technician in the preview room and introduce himself to the moderators of his session. Video presentations are not accepted. Posters : maximal size 90 cm width and 120 cm height including titles.
A comprehensive publication will be issued after the symposium. Presenters should provide their full original manuscript by August 31, 1998. Participants whose papers are published are entitled to receive a free copy of the volume.
Accommodation
At the quiet and beautiful 'Château du Lac', 15 km outside Brussels. Sports facilities (tennis, swimming pool) will be available during leisure time.
Free access available at the 'John Harris Fitness Centre' for participants accommodated at the Château.
When contacting the hotel, please state that you are attending the "Osteosynthesis Symposium" to receive the reduced rate for the dates April 16 through April 19.
Indicative rate : SINGLE 18000 BEF – included : 3 nights bed and breakfast, Château du Lac or Manoir du Lac (same location), access to sports facilities.
Address : Château du Lac, avenue du Lac,
B-1332 Genval, Belgium
Tel. + 32 2 655 71 11 - Fax + 32 2 655 74 44.

Continuing Medical Education Credit
Belgian Accreditation Council, 120 points
(2848.0011, accreditation type 4, 120 U.F.C./N.E.).
A certificate will be provided to interested participants.

Presymposium Course on Upper Extremity External Fixation:
Venue :
Cliniques Universitaires de Bruxelles, Hôpital Erasme,
Auditorium Jaumotte, level 01,
Route de Lennik 808, B-1070 Brussels, Belgium.
Coach transport from and to the Château du Lac will be provided for registered participants.

Information on the Presymposium Course :
M. Donkerwolcke, Dept. of Orthopaedics and Traumatology,
808 route de Lennik, B-1070 Brussels, Belgium.
Tel. 32/2/555 36 44 - Fax : 32/2/520 35 56.

Travel information
The Brussels International Airport has flight connections from many major cities in Europe and overseas. Coach transport from and to the airport is organized on April 15, 16 and 19. One of us will meet you 15 min prior to the departure of the bus, at the Airport meeting point (level arrivals) and at the railway station meeting point (gare du Midi).

Timetable :

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Social program
The welcome reception of April 16 will be held at the Manoir du Lac, close to the Château du Lac, 4 avenue Hoover, B-1332 Genval (tel. 655 63 11).
On April 18, before the banquet, a historical visit of the battlefield of Waterloo, of the farm of the Cailou and of the Wellington Museum is organized. A cocktail will be offered at the museum.
The banquet will then be held in a nice restaurant in the lovely village of Ohain, close to Genval. Please join us!
Upon request, paying excursions may be organized for accompanying persons.

Registration Fees
Before Dec. 1, 1997 14000 BEF (1)
After Dec. 1, 1997 15000 BEF (1)
Resident/Student/Physiotherapist/Nurse 8000 BEF (2)
Optional : Banquet (April 18) 2500 BEF (3)

(1) Fees include meeting attendance, book of abstracts, lunches, welcome reception on April 16, and transport by coach from and to the airport on April 15 and April 19. Not included : hotel accommodation, meals except 2 lunches, access
to sport facilities, symposium book. Acknowledgement of registration and receipt of fees will be sent soon after the registration form and full payment are received. Upon request, a letter of invitation will be sent. Payments should be made net of all bank charges and commission. A 4% commission will be added to all payments made by credit card. Invoices will be expressed in Belgian francs. The organizers cannot be held responsible for any personal injury, loss, damage, accident to private property, or additional expenses incurred as a result of delays or changes in air, rail, sea, road or other services, strikes, sickness, weather, war, sports and other causes. Luggage is at owners risk throughout unless insured. The symposium is organized by the 'Groupe pour l'Etude du Membre Supérieur', ASBL, Brussels.

(2) Please join a certificate signed by head of department.

(3) Include: coach transport Genval-restaurant, touristic visit, and dinner in a typical Belgian restaurant.

Bank: CGER Erasme, 808 route de Lennik, B-1070 Brussels, Belgium on account 001-2343991-62 (GEMS).

The registration desk will be open at the Château du Lac during the following hours
April 16: 16:00-19:00
April 17: 07:30-17:00
April 18: 07:30-17:00

Cancellation
In the event of cancellation, a full refund (less 4000 BEF as a handling fee) of the registration fees may be obtained provided that a written notification is received by Jan 1, 1998. A 50% refund will be made for cancellations received by Feb 1, 1998. No refunds will be made thereafter.

Certificate of attendance
Available at the registration desk. Upon request, a letter of invitation will be sent.

Weather: The weather should be already sunny with mild temperatures. Rain is always possible!

Congress secretariat: F. Schuind, M.D. Ph.D.
Dept. of Orthopaedics
Erasme University Hospital
Route de Lennik 808,
B-1070 Brussels
Tel. +32 2 555 36 91 - 555 68 44
Fax +32 2 520 35 56

REGISTRATION FORM
To be filled in and returned as soon as possible

Name ..............................................................
First name .............................................
Speciality ..................................................
Title .........................................................
Institution ................................................
Address .....................................................
City .................. Country ...................... Zip
Phone ......................... Fax
Arrival date .............. Departure date ..........
Special requests (dietetics, etc.) ..................

Please fill in below as appropriate.

☐ I will participate in the Osteosynthesis Symposium and External Fixation Course (Please note that participation will be considered only after payment of the registration fees; the number of participants is limited; if some participants cannot be accepted, the fees will be reimbursed at no charge).

☐ I will participate in the Osteosynthesis Symposium only.

☐ I like also to attend the banquet and historical visit of April 18.

☐ I cannot attend the Symposium, but would like to purchase the book when published.

☐ Please send me more preliminary programs.

☐ My registration fees are paid as follows:
  ☐ Enclosed check
  ☐ Money order to Belgian account
    GEMS 001-2343991-62
  ☐ Credit card (Euro/Master, Visa)
    Card type : ...........................................
    Card account number : ..........................
    Cardholders' name : .................................
    Expiration date (mo/yr.) : ........................

SIGNATURE ..............................................
DATE ..................................................