CONGRESS

KONGRES

CAPE SUN HOTEL

S.A. Society for Surgery of the Hand

S.A. Vereniging vir Handchirurgie

1987

Message from Don Bodley

Chief Executive
Adcock-Ingram Limited

The founding of a South African Society for Surgery of the Hand was an important milestone in contributing to the organised gathering and sharing of knowledge and expertise amongst the Society's members.

To the organisers of this Congress and those who will be imparting knowledge to their cohorts we thank you for your contributions.

To those who have come to gather knowledge and to share their knowledge, we wish you all a most rewarding Congress and an enjoyable stay in our Mother City.

PAST PRESIDENTS
VORIGE PRESIDENTE

1970 — 1971
I. KAPLAN

1971 — 1973
A.C. BOONZAIER

1973 — 1975
M. SINGER

1975 — 1977
J.H. YOUNGLESON

1977 — 1979
T.L. SARKIN

1979 — 1981
C.E. BLOCH

1981 — 1983
S.L. BIDDULPH

1983 — 1985
W.M.M. MORRIS

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AMPSDRAERS

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L.K. PRETORIUS

Honorary Secretary/Treasurer
Ere-Sekretaris/Tesourier
B.J. VAN R ZEEMAN

Members — Lede
S.L. BIDDULPH
J.H. FLEMING
U. MENNEN
K.S. NAIDOO

CONGRESS ORGANIZER
KONGRES ORGANISEERDER
1987

B.J. VAN R ZEEMAN

ANNUAL GENERAL MEETING
ALGEMENE JAARVERGADERING

7 SEPTEMBER 1987

07h45 — 08h45

(members only/lede alleenlik)

— 1 —
Welcome address by the President
Verwelkoming deur die President

— 2 —
Apologies
Verskonings

— 3 —
Proxies
Volmagte

— 4 —
Minutes of the previous Annual General Meeting
Notule van die vorige Algemene Jaarvergadering

— 5 —
Matters arising from the minutes
Sake wat uit die notule voortspruit

— 6 —
President's report
President se verslag

— 7 —
Honorary Secretary/Treasurer's report
Ere-Sekretaris/Tesourier se verslag

— 8 —
Announcement of new Executive Committee members
Aankondiging van nuwe Uitvoerende Bestuurslede

— 9 —
Announcement of new members
Aankondiging van nuwe lede

— 10 —
Next Annual General Meeting
Volgende Algemene Jaarvergadering

— 11 —
General
Algemeen

SOCIAL EVENTS
SOSIALE BYEENKOMSTE

6 SEPTEMBER 1987

18h00 — 20h00

COCKTAIL PARTY/SKEMERPARTY

(delegates and partners/
afgevaardigdes en metgeselle)

VILLA DEI CESARI, CAPE SUN HOTEL

7 SEPTEMBER 1987

19h30

BANQUET/BANKET

(delegates and partners/
afgevaardigdes en metgeselle)

PRESIDENT HOTEL, SEA POINT/SEEPUNT

LADIES' PROGRAMME
DAMES SE PROGRAM

7 SEPTEMBER 1987

09h00 — 16h00

STELLENBOSCH TOUR WITH LUNCH AT RUST-EN-VREDE
TOER NA STELLENBOSCH EN MIDDAGETE OP RUST-EN-VREDE

INSTRUCTIONAL COURSE
OPKNAPPINGSKURSUS

SUNDAY/SONDAG 6 SEPTEMBER 1987

07h00 — 08h00 Registration/Registrasie: Cape Sun Hotel

08h00 — 08h50 Management and Results of Proximal Phalangeal Fractures

08h50 — 09h00 Discussion/Bespreking

09h00 — 09h50 Fractures of the Hand in Children

09h50 — 10h00 Discussion/Bespreking

10h00 — 10h30 Tea/Tee

10h30 — 11h30 Replantation of Digits: Indications, Operative Techniques and Results

11h30 — 11h45 Discussion/Bespreking

11h45 — 12h45 Thumb and Digit Reconstruction by Free Microvascular Transfer

12h45 — 13h00 Discussion/Bespreking

13h00 — 13h45 Luncheon/Middagete

13h45 — 14h45 A. Management of Extensor Tendon Injuries
B. Management of Acute Flexor Tendon Injuries in Zone II

14h45 — 14h55 Discussion/Bespreking

14h55 — 15h25 Reconstructive Flexor Tendon Surgery:
A. Secondary Flexor Tendon Reconstruction
B. Tenolysis — Indication, Timing & Techniqu

15h25 — 15h30 Discussion /Bespreking

15h30 — 15h45 Tea/Tee

15h45 — 16h45 The Use of Flaps in Hand Trauma: Principles and Choice of Wound Coverage

16h45 — 16h55 Discussion/Bespreking

16h55 — 17h25 Reflex Sympathetic Dystrophy

17h25 — 17h30 Discussion/Bespreking

18h00 — 20h00 Cocktail Party/Skemerparty
(delegates and partners/afgevaardigdes en metgeselle)
Villa dei Cesari, Cape Sun Hotel

PROGRAMME
PROGRAM

MONDAY/MAANDAG 7 SEPTEMBER 1987

07h00 — 07h45 Registration/Registrasie

07h45 — 08h45 Annual General Meeting (members only)
Algemene Jaarvergadering (slegs lede)

09h00 — 10h20 Scientific presentations/
Wetenskaplike voordragte

10h20 — 10h40 Tea/Tee

10h40 — 12h35 Scientific presentations/
Wetenskaplike voordragte

12h35 — 13h30 Luncheon/Middagete

13h30 — 15h05 Scientific presentations/
Wetenskaplike voordragte

15h05 — 15h30 Tea/Tee

15h30 — 17h05 Scientific presentations/
Wetenskaplike voordragte

19h30 Banquet (delegates and partners)
Banket (afgevaardigdes en metgeselle)
President Hotel, Sea Point/Seepunt

THE SOUTH AFRICAN SOCIETY FOR SURGERY OF THE HAND CONGRESS
DIE SUID-AFRIKAANSE VERENIGING VIR HANDCHIRURGIE KONGRES

7 SEPTEMBER 1987 — CAPE TOWN/KAAPSTAD

07h00 — 07h45 Registration/Registrasie

07h45 — 08h45 Annual General Meeting/Algemene Jaarvergadering
Members only/Lede alleenlik

CHAIRMAN: DR C BLOCH

09h00 — 09h15 Macrodactyly — DR KS NAIDOO

09h15 — 09h20 Discussion/Bespreking

09h20 — 09h35 The Management of the Swollen Hand — DR A HERSELMAN

09h35 — 09h40 Discussion/Bespreking

09h40 — 09h55 Hands Up? — DR M MARS

09h55 — 10h00 Discussion/Bespreking

10h00 — 10h15 The Simple, Comfortable, Conforming and Adaptable Splint — PROF U MENNEN

10h15 — 10h20 Discussion /Bespreking

10h20 — 10h40 Tea/Tee

CHAIRMAN: DR M SINGER

10h40 — 11h10 Common Carpal Difficult Problems: Scaphoid Non-Union and Kienböck's Disease — DR J B STEICHEN

11h10 — 11h15 Discussion/Bespreking

11h15 — 11h30 Magnetic Resonance Imaging of Kienböck's Disease — DR C CADDY

11h30 — 11h35 Discussion/Bespreking

11h35 — 11h50 Enhanced Resection Arthroplasty (Zancolli) versus Silicone Replacement Arthroplasty for Trapeziometacarpal Osteoarthritis — DR S HATTINGH

11h50 — 11h55 Discussion/Bespreking

11h55 — 12h10 Multiple Carpo-Metacarpal Dislocation — DR J DE BEER, DR S MALOON, DR P ANDERSON, DR G JONES, DR M SINGER

12h10 — 12h15 Discussion/Bespreking

12h15 — 12h30 Vanishing Bone Disease — A New Disease Entity? — DR BJ MICHELOW, DR A KADWA, DR AC BOONZAIER

12h30 — 12h35 Discussion/Bespreking

12h35 — 13h30 Luncheon/Middagete

CHAIRMAN: DR SL BIDDULPH

13h30 — 14h00 Management of Fingertip Injuries with Bone Exposed — DR JB STEICHEN

14h00 — 14h05 Discussion/Bespreking

14h05 — 14h20 The Treatment of Cut Flexor Tendons at the Baragwanath Hand Unit — DR JH FLEMING

14h20 — 14h25 Discussion /Bespreking

14h25 — 14h40 The 'Spaghetti Wrist' — Analysis of Results and Discussion — DR AD WIDGEROW

14h40 — 14h45 Discussion/Bespreking

14h45 — 15h00 Iatrogenic Hand Injuries — DR P ANDERSON, DR J DE BEER, DR G JONES, DR M SINGER

15h00 — 15h05 Discussion/Bespreking

15h05 — 15h30 Tea/Tee

CHAIRMAN: DR LK PRETORIUS

15h30 — 15h45 The Combined Approach to the Management of Upper Limb Pain — DR KS NAIDOO, CA LIGGINS, N PACHAI

15h45 — 15h50 Discussion/Bespreking

15h50 — 16h05 The Functional Role of Preactivated Tenoblast in Flexor Tendon Transplantation and Repair in the Hand — PROF AJ DE KLERK, PROF LM JONCK

16h05 — 16h10 Discussion/Bespreking

16h10 — 16h25 A Modified Epineural Repair of Peripheral Nerves: A New Technique — DR RS BOOME

16h25 — 16h30 Discussion/Bespreking

16h30 — 17h00 Management of Boutonniere- and Swan Neck Deformities in the Digit — DR JB STEICHEN

17h00 — 17h05 Discussion/Bespreking

19h30 Banquet (delegates and partners)
Banket (afgevaardigdes en metgeselle)
Hotel President, Sea Point/Seepunt

SUMMARIES
OPSOMMINGS

Macrodactyly

KS NAIDOO

This paper will review the subject in the light of experience gained by treating three patients recently. The paper will be extensively illustrated, highlighting the important clinical and radiological features. The intra-operative findings will be presented, showing the main features and also demonstrating the association between macrodactyly and fibrofatty proliferation of the median nerve.

The literature will be reviewed. Also, this group of hand lesions will be compared to a reported series of foot lesions.

The Management of the Swollen Hand

A HERSELMAN

The accumulation of oedema fluid is a normal response of the hand to trauma. Because this swelling delays healing and causes pain and stiffness, thereby compromising functional results, reduction of oedema must be pursued vigorously from the onset of injury.

The pathophysiology of swelling, the anatomical and biomechanical changes in the hand form the logical background for a scientific hand therapy program.

Swelling can be prevented and controlled by elevation, active exercise and massage done in a distal to proximal direction. Other methods used are ice, dry heat and non-steroidal anti-inflammatory drugs. Correct early positioning of the traumatised hand protects it from falling into the position of dysfunction.

Experience with this hand therapy program is presented.

Hands Up?

M MARS

Post-operative swelling remains one of the problems of hand surgery.

In this pilot study we investigated the relationship of postural changes of the upper limb to wound healing potential. Transcutaneous oxygen pressure (TcpO2) measurement has been used to predict amputation wound healing in patients with peripheral arterial occlusive disease.

This simple non-invasive investigation reflects the changes in blood flow resultant on changes in position of a limb with respect to the heart. Values were recorded with limb elevation and circulatory compression that were below accepted values for wound healing.

Further investigation of limb elevation and alternative methods of reducing post-operative swelling is required.

The Simple, Comfortable, Conforming and Adaptable Splint

U MENNEN

A new, readily available, adaptable, easy to use and patient friendly splint, for a variety of post-operative and post-traumatic hand conditions, is presented.

It consists basically of two sheets of sticky foam rubber with the injured hand sandwiched in between in the desired position. The elasticity of the foam ensures recoil to the original position when the joints of the hand are mobilised. The soft padding also protects the injured hand and conforms ideally to swelling.

Common Carpal Difficult Problems: Scaphoid Non-union and Kienböck's Disease

JB STEICHEN

Factors predisposing to scaphoid non-union include delayed diagnosis and treatment, inadequate immobilization, location of the fracture, blood supply to the fracture fragments, any displacement of the fracture and asscciated carpal instability.

The natural history of untreated scaphoid non-union is sclerosis, cyst formation and bone resorption, radioscaphoid arthritis and progressive panscaphoid arthritis and carpal instability.

Treatment options for scaphoid non-union include bone grafting, prolonged cast immobilization, electrical stimulation, compression screw osteosynthesis, excision of the small proximal fragment and silastic scaphoid arthroplasty. Salvage procedures for established non-union with arthritic changes include among many procedures proximal row carpectomy, silastic wrist replacement arthroplasty, limited wrist arthrodesis or total wrist arthrodesis.

Treatment of scaphoid non-union without peri-scaphoid arthritis should include reduction of the displaced fragments, correction of any carpal collapse, iliac or radial bone graft associated with stable internal fixation and an adequate length of external immobilization.

Dr Robert Kienböck described progressive changes of avascular necrosis in the lunate of unknown etiology. Probable causes may include repetitive compression forces to the lunate usually associated with a predisposing negative ulnar variance. The 1977 staging proposed by Lichtman in the Journal of Bone and Joint Surgery based on clinical and radiographic findings is useful to attempt to select a treatment protocol and predict the outcome of treatment.

Treatment choices include immobilization and/or distraction, bone grafting, revascularization, intracarpal decompression with partial wrist fusion and forearm length adjustment with or without lunate replacement. For advanced collapse a wrist fusion may be necessary.

Magnetic Resonance Imaging of Kienböck's Disease

C CADDY

Kienböck's disease (lunatomalacia) has emerged as one of the most challenging conditions facing the hand surgeon. Early diagnosis and treatment are important because the condition affects the young productive segment of the population.

Magnetic resonance imaging has already shown great potential in evaluating osteonecrosis and other musculo-skeletal disorders. The intrinsically high soft tissue contrast, the ability to image in multiple planes, the ability to manipulate tissue contrast and the high sensitivity to marrow-based pathologic conditions give MRI significant advantages over other imaging techniques.

Our experience with MRI as a diagnostic adjunct, with particular reference to the early case, will be presented.

Enhanced Resection Arthroplasty (Zancolli) vs. Silicone Replacement Arthroplasty for Trapezio-metacarpal Osteoarthritis

S HATTINGH

A comparison between 14 patients with trapezial resection enhanced with the digastric tendon pulled through the base of the first metacarpal (Zancolli) and 14 patients with resection arthroplasty with a big toe silicone metatarsophalangeal prosthesis was made.

The following parameters were measured:

1. Key pinch strength
2. Grip strength
3. Abduction
4. Opposition
5. Subluxation
6. Dislocation

The anatomy, pathology and surgical techniques will be discussed briefly. Results are compared between the two groups and other studies in the literature.

Multiple Carpo-Metacarpal Dislocation

J DE BEER, S MALOON, P ANDERSON, G JONES, M SINGER

Closed multiple carpo-metacarpal joint dislocations are uncommon hand injuries, usually resulting from direct, high energy trauma. We present eight patients with unilateral closed multiple carpo-metacarpal dislocations seen and treated at the Groote Schuur Hospital Hand Unit over a two year period (1984 to 1986).

We found that closed reduction was usually easily obtained provided the patient was treated early. Additionally, the inherently unstable nature of these injuries requires immediate percutaneous smooth wire fixation to maintain reduction in most cases. Open reduction should always be accompanied by simultaneous smooth wire internal fixation.

The prognosis for subsequent hand function in the patient treated early and appropriately is excellent.

Vanishing Bone Disease — A New Entity?

BJ MICHELOW, A KADWA, AC BOONZAIER

Injuries of the hand, complicated by infection, is a common complaint of patients presenting to the Hillbrow Hospital. The clinical picture presented by the patients was noted to be unlike the textbook description of hand infections and the frequent occurrence of osteïtis emphasised the severity of this condition. These factors prompted a study into the nature of this disease.

This report details a number of interesting clinical observations that resulted from the study. It aims, once again, to focus attention on the serious problem of hand sepsis, highlighting some aetiological factors as well as treatment protocols.

Management of Fingertip Injuries with Bone Exposed

JB STEICHEN

The goals of treatment include adequate sensation to the tip of the finger, maintenance of maximum length to the digit with minimal tenderness on the tip, a satisfactory cosmetic appearance as well as full joint motion to the remainder of the digit as well as the rest of the hand.

When selecting the proper surgical treatment for a fingertip injury, multiple factors must be considered by the surgeon including the age, occupation and sex of the patient to try to select a choice of treatment that will not only solve the problems of the traumatic defect, but also not create additional cosmetic, psychological or functional problems in adjacent fingers, etc. The nature of the defect including the size, shape and location of the defect must also be considered in order to choose the correct procedure.

The principles of treatment of fingertip injuries with exposed bone include preserving all viable local tissue as well as choosing the SIMPLEST procedure that is consistent with the patient and wound factors as noted, the goals of the treatment and the capabilities and experience of the surgeon.

The multiplicity of surgical procedures available for fingertip injuries can be broken into simple and complex procedures.

"Simpler" procedures include shortening of the skeleton with a choice of primary skin closure, partial thickness skin grafts over advanced subcutaneous tissue or healing by secondary intention.

More complex procedures available include closure of the wound with a volar V-Y advancement flap, Kutler lateral advancement flaps, volar advancement flap of Moberg as well as local rotational or transpositional flaps with skin graft to the donor site. Cross finger, thenar or remote pedicle flaps are other available procedures for more complex injuries.

The surgeon must be aware that there are multiple methods of treatment available. Each patient and each fingertip defect demands individual evaluation and treatment and the success of the treatment may depend upon the experienced judgement of the surgeon.

The Treatment of Cut Flexor Tendons at the Baragwanath Hand Unit

JH FLEMING

Twelve years ago the treatment of cut flexor tendons at Baragwanath Hospital was less than ideal.

Today, every new nerve and tendon injury is admitted directly to theatre. The wound is debrided and a large occlusive dressing applied. Every day throughout the seven days of the week, the Hand Registrars consult the fresh admissions and arrange a delayed primary repair.

The precise surgical techniques will be described in detail with special reference to preservation of the pulley system.

Subjectively, the results are acceptable to me and the dark days of 1975 seem far away.

For the future, I believe the results could be significantly improved by four practical factors:

1. A six month stay in the Hand Unit to improve the registrar's skill
2. Recognition of the hand therepist's important role
3. Welfare benefits
4. Improved clerical facilities

The 'Spaghetti Wrist' Analysis of Results and Discussion

A WIDGEROW

This study analyses the results of approximately 20 patients with extensive volar wrist lacerations, involving at least 10 structures, represented in each case by tendons and at least one major nerve and one major vessel.

The analysis adresses several surgical and management problems, including:

Type and position of immobilization
Period of immobilization
Active or passive mobilization
Necessity of repair of superficial tendons in certain structures
Necessity of repair of wrist flexors in certain situations
Ulnar artery repair
Carpal tunnel decompression
Timing of nerve repairs
Methods of evaluation of results

Iatrogenic Hand Injuries

P ANDERSON, J DE BEER, G JONES, M SINGER

A review of nine patients seen and managed at the Groote Schuur Hospital Hand Unit are presented and analysed.

All patients sustained their injuries while being treated for major or minor problems and all experienced a delay in diagnosis and hence referral for definitive management; the result being that all were associated with significant morbidity and functional impairment and all required intensive specialised treatment for a considerable period of time.

The Combined Approach to the Management of Upper Limb Pain

KS NAIDOO, C LIGGINS, N PACHAI

Pain in the upper limb can become chronic if not treated promptly and adequately. Once established, chronic pain can be the cause of severe psychological and physical disability. A wide variety of methods are available for the relief of pain.

This paper presents an approach to the management of those painful conditions which, if not treated expeditiously, can easily be rendered chronic. Initially, experience was gained by treating painful brachial plexus lesions. Once confidence was gained, the method was extended to other lesions, e.g. traumatic amputations, tumours, scars, etc.

The policy of treatment will be outlined. The details of the various methods will be adequately illustrated.

The patient is initially assessed clinically by medical and physiotherapeutic methods. The management is then planned and includes the following modalities:

sedation, anti-inflammatory drugs, acupuncture/electropuncture, tense, interferential therapy, friction, ultra-sound and surgery.

Follow-up will be provided.

The Functional Role of Preactivated Tenoblast in Flexor Tendon Transplantation

AJ DE KLERK, LM JONCK

In experimental studies on flexor tendon repair, it was noted that tendon collagen has an extraordinary resistance to trauma.

It was found that the peak recovery period indicated by a high cell activity and vascular response occurred three weeks after stimulation. On these grounds it was postulated that the best results will be achieved when a transplantation procedure is undertaken three weeks after primary tendon stimulation.

Fifteen baboons were operated on.

Apart from the surgical procedures, the study also included the functional role of the endo tendon in tendon repair, the functional role of the synovium as related to the preactivation of the tendon and the application of these principles to enhance tendon repair.

A Modified Repair of Peripheral Nerves — A New Technique

RS BOOME

One of the running problems in peripheral nerve repair is the control of tension across the repair site.

A new technique which the author has been using clinically for some years was performed on experimental animals to quantitate the benefits.

The sciatic nerve of the rabbit was used as a model and three types of repair were tested, namely:

1. The standard epineural repair
2. The new modified epineural repair, using sutures
3. The same modified epineural repair, using tissue glue

The experimental results will be presented and discussed.

Management of Boutonniere- and Swan Neck Deformities in the Digit

JB STEICHEN

Clinical presentation of a boutonniere deformity in the digit when active extension is attempted is demonstrated by the PIP joint remaining flexed and the DIP joint hyperextended. This clinical syndrome is created by the anatomical changes of severance or rupture of the central slip associated with a tear of the triangular ligamentous fibres which allows volar migration of the lateral bands. The flexion of the PIP joint is then secondary to the overpull of the flexor digitorum superficialis accompanied with the unrestrained pull of the lateral bands which then flex the PIP joint and hyperextend the DIP joint. The treatment of an acute boutonniere injury involves immobilizing the PIP joint in full extension for a minimum of six weeks associated with a repair of the tendon if an open injury. Only the PIP joint should be immobilized with active motion maintained in the MP and DIP joints.

Multiple surgical procedures are available for treatment of the chronic boutonniere deformity which are also associated with immobilization of the PIP joint for a prolonged period of time allowing the reconstructed extensor mechanism to heal.

A series of 35 patients with chronic boutonniere deformities of greater than eight weeks at the time of initial presentation were treated with an Elliot surgical repair. From a retrospective evaluation of this series, an analysis of prognostic factors was determined including the amount of contracture present at the time of initial evaluation, the age of the patient, etc. The prognostic factors and results will be presented.

A swan neck deformity in a digit is clinically expressed by PIP hyperextension associated with DIP flexion when the patient attempts to fully actively extend the digit.

Etiology of this deformity includes congenital changes in the extensor mechanism, hypermobility, cerebral palsy, intrinsic contracture, rheumatoid arthritis and trauma.

A swan neck deformity can be created by pathology at the DIP, PIP or MP joint level. Treatment may be by splinting, soft tissue reconstruction or surgical release and joint arthroplasties.

ACKNOWLEDGEMENTS
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DR JAMES B STEICHEN
Indianapolis, Indiana
is co-guest of the SASSH, SAOA and MRC
is mede-gas van die SAVH, SAOV en MNR

MRC has contributed generously to the expenses of Dr Steichen
MNR het ruim tot die uitgawes van Dr Steichen bygedra

COVER/BUITEBLAD:
GREGOIRE BOONZAIER, RICHARD PEDLER

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