26 CONGRESS / KONGRES

THE SOUTH AFRICAN SOCIETY FOR SURGERY OF THE HAND

DIE SUID-AFRIKAANSE VERENIGING VIR HANDCHIRURGIE

2 - 3 September 1995

DURBAN

WILSENACH 930625 F

ciba

®Voltaren GT50

Diclophenac sodium 50 mg K/3.1/253

WILSENACH 930625 D

®Voltaren

75 AMPOULES

Diclophenac sodium 75 mg/3 ml H/3.1/34

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INHOUDSOPGAWE

MESSAGE OF WELCOME

DR JOHN H. FLEMING
PRESIDENT

THE SOUTH AFRICAN SOCIETY FOR SURGERY OF THE HAND

Welcome to our Spring Congress and to beautiful tropical Durban - an evergreen favourite.

I am sure that the academic contributions will be of the same high standard that we have enjoyed in the past. We are delighted to welcome our guest, Dr. Geoff Hooper, Head of the Hand Unit of Edinburgh, a Unit internationally known for its excellence.

Many congratulations go to Professor K.S. Naidoo and our Executive Secretary Hendrika van der Merwe for the stimulating program and we acknowledge the great effort they have put into organising this congress.

MESSAGE FROM

PROF K.S. NAIDOO CONGRESS ORGANISER

It is a pleasure to welcome all delegates to the 26th Congress of the S.A. Society for Surgery of the Hand. We trust that your stay in Durban will be pleasant and that you will enjoy the many changes that have taken place since the last congress in Durban.

We are privileged to have Mr. Geoff Hooper as our guest lecturer. He is an outstanding teacher following in the footsteps of Douglas Lamb. The instructional course arranged by Geoff Hooper covers a wide variety of important topics and promises to be a great success. His participation in the scientific session will also enrich the quality of the programme.

I wish to thank Mrs. H. van der Merwe and Mr. L.K. Pretorius for their help in organising this congress. Thanks also due to 'The Trade' and other local helpers.

MESSAGE FROM

MR. J.G. NIEHAUS
HEAD : CIBA PHARMACEUTICAL DIVISION

It is with great pleasure that I welcome you all to this, the 26th Congress of The South African Society for Surgery of the Hand.

Through innovation and commitment to excellence, CIBA strives to meet the needs of its partners in health care, by continuing to show its commitment and support for The South African Society for Surgery of the Hand.

We all face vast challenges in the health care environment with all the proposed changes and emphasis on primary health care. Throughout these challenges we continuously emphasize the importance of continuing medical education whilst not neglecting the important task of addressing the needs of our nation.

Good luck and enjoy the conference.

GUEST SPEAKER GASSPREKER

Geoffrey Hooper
Edinburgh, United Kingdom

PAST PRESIDENTS/VORIGE PRESIDENTE

1969 - 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*
1985 - 1987	*L.K. Pretorius*
1987 - 1989	*K.S. Naidoo*
1989 - 1991	*S.L. Biddulph*
1991 - April 1992	*B.J. Van R. Zeeman*
April 1992 - 1993	*S.L. Biddulph*

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Honorary Secretary/Treasurer ***Ere-sekretaris/Tesourier***	*L.K. Pretorius*
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Executive Secretary/ ***Uitvoerende Sekretaresse***	*Hendrika van der Merwe*

CONGRESS ORGANISERS	*Prof K.S. Naidoo*
KONGRESORGANISEERDERS ***1995***	*Hendrika van der Merwe*

ANNUAL GENERAL MEETING
ALGEMENE JAARVERGADERING

SATURDAY 2 SEPTEMBER 1995
16:30 - 17:15

(Members only/Lede alleenlik)

Venue/Plek
Auditorium
Marine Parade Holiday Inn Garden Court

1
Welcome address by the President
Verwelkoming deur die President

2
Apologies & Proxies
Verskonings & Volmagte

3
Minutes of the previous Annual General Meeting
Notule van die vorige Algemene Jaarvergadering

4
Matters arising from the minutes
Sake wat uit die notule voortspruit

5
President's report
President se verslag

6
Honorary Secretary/Treasurer's report
Ere-Sekretaris/Tesourier se verslag

7
Proposed increase in Entrance Fee and Annual Subscription
Voorgestelde verhoging in Intreefooi en Jaargeld

8
Announcement of New Executive Committee
Aankondiging van Nuwe Uitvoerende Bestuur

9
Membership/Lidmaatskap

10
General/Algemeen

11
Next Annual General Meeting
Volgende Algemene Jaarvergadering

SOCIAL EVENT
SOSIALE BYEENKOMS

2 SEPTEMBER 1995

17:30

COCKTAIL/SKEMERKELK

(delegates and partners/
kongresgangers en metgeselle)

Pre-Assembly Area
MARINE PARADE HOLIDAY INN GARDEN COURT
DURBAN

Admission to this function by invitation only

NEXT CONGRESS
VOLGENDE KONGRES

31 August - 1 September 1996
JOHANNESBURG

GENERAL INFORMATION
ALGEMENE INLIGTING

Congress venue	*Marine Parade Holiday Inn Garden Court* *167 Marine Parade* *DURBAN*
Information Desk	*Will be run by Smith & Nephew in the Pre-Assembly Area*
Telephone Number	*(031) 37 3341*
Fax Number	*(031) 32 9885*
Teas and Lunches	*Will be served in the trade exhibition area*
Slide Preview Room	*Michaelhouse Boardroom, Lower Ground Floor*
Parking	*Ample parking at the venue*

Please wear your name tag at all times

SCIENTIFIC PROGRAMME

CONGRESS
2 SEPTEMBER 1995

07:15 - 08:00	Registration/Registrasie	
08:00 - 08:10	Welcome and announcements Verwelkoming en aankondigings	*Dr. J.H. Fleming*

SESSION ONE

CHAIRMAN/VOORSITTER: Dr J.H. Fleming

08:10 - 08:30	A Chapter in the History of Thumb Reconstruction *Mr. Geoffrey Hooper, Edinburgh, UK*
08:30 - 08:35	Discussion/Bespreking
08:35 - 08:45	External fixation for metacarpal and phalangeal fractures with bone loss *Dr. E.M. Carides, Dr. J.R. Lindsay, Johannesburg*
08:45 - 08:50	Discussion/Bespreking
08:50 - 09:00	Dislocations of the PIP joints: How should we approach them? *Miss J. Exter*, Pretoria*
09:00 - 09:05	Discussion/Bespreking
09:05 - 09:15	Stability of base fractures of the proximal phalanx? *Drs. C.S. Ladas*, A.D. Widgerow, Johannesburg*
09:15 - 09:20	Discussion/Bespreking
09:20 - 09:30	HIV on an Emergency Hand Service *Drs. V. Ching*, M. Ritz, C. Song, Johannesburg*
09:30 - 09:35	Discussion/Bespreking
09:35 - 09:45	Management of Complex Hand Fractures: A Comparative Study *Dr E M Carides, Johannesburg*
09:45 - 09:50	Discussion/Bespreking
09:50 - 10:00	Scaphoid Exostosis and Radiocarpal Osteoarthritis *Dr. I.G. Bhoora*, Durban & Mr G Hooper, U K*
10:00 - 10:05	Discussion/Bespreking
10:05 - 10:30	TEA/TEE

SESSION TWO

CHAIRMAN/VOORSITTER: Prof. K.S. Naidoo

10:30 - 10:40	Prefabricated Vascularized Nerve Grafts: A Preliminary Report *Drs. C.V. Leong*, M. Ritz, Johannesburg*
10:40 - 10:45	Discussion/Bespreking
10:45 - 10:55	Shoulder Symptoms and Signs in Thoracic Outlet Syndrome *Drs. J.F. de Beer, P. Jansön, K. van Rooyen, Cape Town*
10:55 - 11:00	Discussion/Bespreking
11:00 - 11:10	Arthroscopic Surgery for Calcific Tendinitis of the Rotator Cuff *Drs. J.F. De Beer, C.W. Ackermann, K. van Rooyen, Cape Town*
11:10 - 11:15	Discussion/Bespreking
11:15 - 11:25	Interscalene Nerve Block and Phrenic Nerve Function *Drs. K. Van Rooyen*, A. Boezaart, J.F. de Beer, Cape Town*
11:25 - 11:30	Discussion/Bespreking
11:30 - 11:40	Comparing Functional Results of the Riordan and Tsuge Tendon Transfers for Radial Nerve Palsy *Drs. W.M. Van der Merwe*, L.T. De Jager, Cape Town*
11:40 - 11:45	Discussion/Bespreking
11:45 - 11:55	Fingertip Amputations: A Retrospective Study *Dr. A.G. Zinn*, Durban*
11:55 - 12:00	Discussion/Bespreking
12:00 - 12:10	Effects of Interposed Fibrin Glue on Nerve Conduction Velocities in Peripheral Nerve Repair *Dr. J.R. Lindsay, Johannesburg, L. van Heerden, Pretoria*
12:10 - 12:15	Discussion/Bespreking
12:15 - 12:25	Neurotisation of Full Thickness versus Split Thickness Skin Grafts *Drs. C.S. Ladas & A. Widgerow, Johannesburg*
12:25 - 12:30	Discussion/Bespreking
12:30 - 12:40	Arthrogryposis Multiplex Congenita: An Intra Uterine Lesion *Prof. U. Mennen, Medunsa, I. Williams, Johannesburg*
12:40 - 12:45	Discussion/Bespreking

12:45 - 12:55 The Evaluation of Function of the Flail Upper limb
Mrs. I. Eggers, Medunsa*

12:55 - 13:00 Discussion/Bespreking

13:00 - 14:00 LUNCH/MIDDAGETE

SESSION THREE

CHAIRMAN/VOORSITTER: Prof. U. Mennen

14:00 - 14:15 Presidential Report
Dr. J.H. Fleming, President - SASSH

14:15 - 14:40 Phocomelia: Classification and Treatment
Mr G Hooper, Edinburgh, U K

14:40 - 14:45 Discussion/Bespreking

14:45 - 14:55 Total Excision of the Scaphoid: A Report of Eight Cases *Drs. J.R. Lindsay, W.B. Stuart, Johannesburg*

14:55 - 15:00 Discussion/Bespreking

15:00 - 15:10 Conchal Cartilage Interposition Arthroplasty
Dr. G. Psaras, Johannesburg*

15:10 - 15:15 Discussion/Bespreking

15:15 - 15:25 Dura Mater Allograft as an Interpositional Material: A Report of Two Cases
Drs. J.R. Lindsay, M. Carides, J. Craig, Johannesburg

15:25 - 15:30 Discussion/Bespreking

* Papers for consideration for Smith & Nephew Literary Award

15:30 - 15:50 TEA/TEE

SESSION FOUR

CHAIRMAN/VOORSITTER: Dr J H Fleming

15:50 - 16:10 Camptodactyly - Should it be treated?
Mr. G. Hooper, Edinburgh, UK

16:10 - 16:15 Discussion/Bespreking

16:15 - 16:20 Closure/Afsluiting

16:30 - 17:15 Annual General Meeting (members only)
Algemene Jaarvergadering (slegs lede)
Venue/Plek: Auditorium, Marine Parade
Holiday Inn Garden Court

17:30 - 19:30 Social Function

INSTRUCTIONAL COURSE/OPKNAPPINGSKURSUS
3 SEPTEMBER 1995

Presented by / Aangebied deur

MR. GEOFFREY HOOPER

07:45 - 08:15 Registration

CHAIRMAN/VOORSITTER: Prof. U. Mennen

08:30 - 09:15 Techniques of Arthrodesis in the Hand

09:15 - 09:30 Discussion/Bespreking

09:30 - 10:15 Bone Tumours in the Hand

10:15 - 10:30 Discussion/Bespreking

10:30 - 11:00 TEA/TEE

CHAIRMAN/VOORSITTER: Dr. L.T. De Jager

11:00 - 11:45 Compartment Syndrome in the Upper Limb

11:45 - 12:00 Discussion/Bespreking

12:00 - 12:45 Nerve Compression Lesions in the Upper Limb

12:45 - 13:00 Discussion/Bespreking

13:00 - 14:00 LUNCH/MIDDAGETE

CHAIRMAN/VOORSITTER: Dr. E. Bowen-Jones

14:00 - 14:45 Congenital Anomalies of the Upper Limb Classification and Principles of Management

14:45 - 15:00 Discussion/Bespreking

15:00 - 15:45 Soft Tissue Tumours in the Hand

15:45 - 16:00 Discussion/Bespreking

16:00 - 16:45 Reflex Sympathetic Dystrophy

16:45 - 17:00 Discussion/Bespreking

SUMMARIES OF PAPERS
OPSOMMINGS VAN VOORDRAGTE

1. *MR. GEOFFREY HOOPER: A CHAPTER IN THE HISTORY OF THUMB RECONSTRUCTION*

The first pollicization using the index finger ray mobilized without division of the neurovascular bundles is usually attributed to J Gosset who described it in 1948. Yet the technique had been reported in 1946 by A Murray, a young Australian surgeon working in Edinburgh during the Second World War. Murray's other innovations in hand surgery will be described, with long term follow ups on two of his patients who had digital reconstructions by pedicled transfer of digits from the opposite hand.

2 *DRS. E.M. CARIDES, J.R. LINDSAY: EXTERNAL FIXATION FOR METACARPAL AND PHALANGEAL FRACTURES WITH BONE LOSS*

Fractures in the hand managed with external fixatives have been reviewed to assess the final outcome in these patients and to evaluate our results.

Our indications for the use of external fixation included only compound comminuted fractures with significant associated soft tissue injuries. Where wound conditions permitted and where bone loss was present, delayed primary bone grafting was performed.

Although the literature reports up to 85% good or excellent results, this has not been our experience. Complications and results following the use of the Orthofix and Shearer micro external fixators are discussed.

We conclude that use of the external fixator for the treatment of difficult fractures of the metacarpals and phalanges is simple and safe. Union rate in the hand is high compared to the use of external fixators in the treatment of other long bone fractures. Intensive physiotherapy and good patient compliance, however, are essential to ensure a good result.

3. *MISS J. EXTER: DISLOCATIONS OF THE PIP JOINTS: HOW SHOULD WE APPROACH THEM?*

Rehabilitation of the PIP joints following injury involves careful assessment, meticulous recording of progress, an individualized therapy programme and intensive patient education.

Prevention of stiffness and deformity is the primary goal. The ideal situation is to begin the patient's therapy as soon as possible, the earlier they are slotted into a structured programme, the better. This reduces the development of deformity and increases the chances of a full and successful recovery.

A comparison is drawn between two treatment approaches for the common PIP joint dislocation.

On the one hand these injuries are neglected, in that they are in many cases reduced by the patient immediately after injury, they are then either not seen by a hand team or are seen and simply 'Buddy-Strapped' and encouraged to exercise on their own - not quite knowing why and how they should exercise. These cases tend to re-appear at later stages with stiff, non-functional fingers. A referral at this stage to hand therapy, although beneficial, lengthens as well as complicates the therapy programme as instead of preventing a deformity one has to correct a long-standing one.

On the other hand, immediate referral to a hand therapist aids in preventing unnecessary contractures, enhances the patient's recovery and ensures their return to normal use of the hand. This programme includes immediate IP joints static extension splinting to maintain a certain degree of extension and to aid the reduction of pain and swelling, whilst maintaining the joints in the 'safe' position. This stage is then followed by a regular and gentle active exercise programme, whilst continuing use of the previous IP joint extension splint. This stage is further followed up with controlled gentle dynamic flexion splinting of first the PIP joint and then the DIP joint combined with static IP joint extension splinting and a regular active exercise programme.

In comparing through case studies these two approaches, it is hoped that the medical profession will be reminded of the importance of prevention of a deformity, the urgency of correct and immediate attention to the injury and the gravity of injuries to the IP joints of the hand.

4. *DRS. C.S. LADAS, A.D. WIDGEROW: STABILITY OF BASE FRACTURES OF THE PROXIMAL PHALANX?*

Introduction: Fractures of the base of the proximal phalanx of the hand may be considered a unique anatomical entity. This concept is based on the fact that the base of the proximal phalanx is stabilised to an unknown degree by the attachments of the intrinsic musculature. The exact extent of this attachment has not yet been defined.

Methods: This study defines the anatomical boundaries of the attachment of the intrinsic musculature to the base of the proximal phalanx.

These boundaries were ascertained by study of dissections of 25 individual digits.

The results of this study have been correlated with the clinical treatment of fractures of the base of the proximal phalanx and treatment possibilities are suggested.

5. *DRS. V. CHING, M. RITZ, C. SONG: HIV ON AN EMERGENCY HAND SERVICE*

A study prompted by the high number of HIV patients in our population was performed to evaluate the incidence of HIV in patients attending our Emergency Hand Service. Over 500 consecutive emergency patients were tested over a six month period for HIV. In our series 24 patients tested HIV positive. Fourteen patients presented with hand sepsis and 10 patients with hand injuries. Bacteriology was performed on all septic cases to document bacteria type and sensitivity. CD4 counts (T4 Lymphocyte counts) were done on 12 patients to assess immunocompetence. Other factors examined included: hospital stay, number of operations, morbidity and mechanism of injury. Results indicate that septic HIV patients spent more time in hospital and required more operations than septic non-HIV patients. Furthermore, HIV positive patients were found to have an increased risk of becoming septic.

6. *DR. E.M. CARIDES: MANAGEMENT OF COMPLEX HAND FRACTURES: A COMPARATIVE STUDY*

The aims of the study are to assess the outcome of severe compound comminuted fractures in the hand and to compare the results of different fixation methods.

Treatment modalities included use of the micro external fixator, rigid internal fixation using plates and screws and open reduction followed by fixation with percutaneous Kirschner wires. Where wound conditions permitted, delayed primary bone grafting was performed.

Results to date show no significant difference in rates of wound healing and bone union, the incidence of sepsis and residual stiffness in fractures treated by any of the above methods. Patients who underwent primary bone graft, however, required a shorter rehabilitation period.

Conclusion: The often unsatisfactory outcome of these fractures is largely due to the severity of associated soft tissue injuries and is not significantly influenced by the type of fixation employed.

7. *DR. I.G. BHOORA, MR. G. HOOPER: SCAPHOID EXOSTOSIS AND RADIOCARPAL OSTEOARTHRITIS*

We report 5 patients (6 wrists) with osteoarthritis of the wrist in association with an exostosis arising from the dorsal aspect of the scaphoid.

These patients were studied over a 14-year period. Their mean age was 64 years (range 44 - 84). All patients presented with wrist pain, stiffness and a swelling on the dorsum of the wrist. Radial deviation at the wrist was markedly restricted in all cases, whilst other movements were preserved. All patients had typical X-ray features of radiocarpal osteoarthritis, with an instability pattern in 5 wrists. The scaphoid exostosis was best seen on a PA tangential view of the wrist. Two patients were treated surgically by removal of the exostosis and all other patients managed conservatively with splintage and analgesia.

Both cases treated surgically had rapid reformation. We believe that the exostosis is secondary to impingement of the scaphoid on the radial styloid process and is a consequence rather than a cause of the osteoarthritis. Conservative management is advised.

8. *DRS. C.V. LEONG, M. RITZ: PREFABRICATED VASCULARIZED NERVE GRAFTS: A PRELIMINARY REPORT*

Nerve grafts, in particular vascularized nerve grafts, are reliable in bridging large nerve defects, especially in beds with questionable vascularity. When conventional donor nerves are not available, an alternative source has to be sought.

We will present a unique case, where redundant nerves from an amputated stump were used. This was vascularized from regional tissue and transferred as a prefabricated vascularized nerve graft to fill the nerve defects in a scarred bed.

Encouraging results will be presented, as well as the technique, concept and possible future implications will be discussed.

9. *DRS. J.F. DE BEER, P. JANSöN, K. VAN ROOYEN: SHOULDER SYMPTOMS AND SIGNS IN THORACIC OUTLET SYNDROME*

Introduction: A fair number of patients are regularly referred to the author with apparent shoulder pain, either primarily or after failed shoulder surgery - a significant number turned out to suffer from the Thoracic Outlet Syndrome (TOS)

Patients and Methods: Fifty patients were seen and referred to a Thoracic Surgeon who is specifically interested in TOS. In 46 patients (92%) he agreed with the diagnosis and did trans-axillary first rib resection in 36. In 89% of the patients there was a marked improvement following surgery.

Discussion: TOS is a remarkably difficult condition to diagnose in some patients. The condition is more common than often realised. It can mimick shoulder pathology : the clinical presentation and examination will be discussed in detail, especially with reference to "overlapping" clinical tests.

10. *DRS J.F. DE BEER, C.W. ACKERMANN, K. VAN ROOYEN: ARTHROSCOPIC SURGERY FOR CALCIFIC TENDINITIS OF THE ROTATOR CUFF*

Introduction: The arthroscopic removal of calcific deposits from the rotator cuff has become a widely accepted surgical method to treat cases resistant to conservative management.

Patients and Methods: Thirty six patients were studied retrospectively. All patients presented with recurrent attacks of severe shoulder pain over a relatively long period. The diagnosis was made combining clinical examination, ultra-sound evaluation as well as X-ray studies. Patients were followed up post-operatively in the clinic in the short and medium term and telephonically in the longer term.

Results: In 90% of all the patients an excellent result was achieved as far as pain relief and function were concerned. Attention was paid to the time to normal function, as this can be surprisingly long with open surgical treatment.

Discussion: Arthroscopic surgery for calcific tendinitis is the treatment method of choice for cases resistant to conservative measures. Return to pain-free normal function is much more rapid than with open surgical methods.

11. *DRS. K. VAN ROOYEN, A. BOEZAART, J.F. DE BEER: INTERSCALENE NERVE BLOCK AND PHRENIC NERVE FUNCTION*

Introduction: Interscalene brachial plexus nerve bloacks are widely used to manage intra- and postoperative pain during and after shoulder surgery. As the subspecialty of shoulder surgery, and more specifically arthroscopic shoulder surgery is relatively new, the management of the associated pain is not yet clear. Although interscalene nerve block (ISNB) reportedly provides excellent analgesia, one of the potentially dangerous complications of ISNB is that of associated phrenic nerve block (PNB) and consequently hemidiaphragm paralysis in the postoperative period. This study attempted to quantify PNB and hemidiaphragmatic paralysis as complication of ISNB.

Patients and Methods: Following institutional and informed patient consent, 33 consecutive ASAI patients presenting for shoulder surgery were studied. All patients received a standardised premedication and general anaesthesia followed by a standardised ISNB. Nineteen ml bupivacaine 0,5% and 1 ml lignocaine 10% was used for the ISNB. Post Anaesthetic Care Unit monitoring was standard and, when the patients recovered from general anaesthesia, they were positioned in a 30° head-up position and requested to breathe normally while bilateral diaphragmatic movements were measured ultrasonographically. Pain was measured by making use of a visual analogue scale (VAS) from 0 to 10.

Results: 86% of the patients studied revealed total paralysis of the hemidiaphragm on the side of the ISNB. One patient had only a partial brachial plexus block but had no movement of the diaphragm on the side of the ISNB. This incomplete ISNB was repeated and, on second attempt, showed complete brachial plexus and phrenic nerve blocks. The mean diaphragmatic movement on the unblocked side was 31,85 ± 3,29 mm (mean ± STD) and on the side of the effective ISNB it was 4 mm. Eight hours after the ISNB analgesia was still excellent (VAS = 0) and the diaphragmatic movement was 33,44 ± 4,34 mm on the unblocked side and 15,22 ± 2,02 mm on the side of the ISNB. Post-operative analgesia was excellent (VAS = 0) in all patients and no patient experienced any complications of the PNB although only ASAI patients were studied.

Discussion: ISNB provides excellent intra- and postoperative analgesia during and after shoulder surgery. If the ISNB was successful, however, almost 100% of patients in this study experienced complete diaphragmatic paralysis due to PNB. This may even be true for incomplete brachial plexus nerve block. It should be of value for anaesthesiologists and surgeons, when selecting patients for ISNB, to realise that all patients with successful ISNB will probably have co-existing PNB and that the PNB will persist (at least partially) for well over 8 hours. The authors suspect that the 8 - 25% incidence of PNB following ISNB previously reported by us and in the literature (where diaphragmatic function were not objectively measured but clinical methods were employed to evaluate phrenic nerve function) probably represent the incidence of patients who developed complications of PNB. Patients should be closely monitored postoperatively and alternative analgesia should probably be offered to patients with co-existing respiratory or cardiovascular disease.

12. *DRS W M VAN DER MERWE, L T DE JAGER: COMPARING FUNCTIONAL RESULTS OF THE RIORDAN AND TSUGE TENDON TRANSFERS FOR RADIAL NERVE PALSY*

Riordan's method has been widely used at Groote Schuur Hand Unit to transfer tendons in radial nerve palsy. There have been some problems with radial deviation of the wrist and loss of flexion at the wrist.

Tsuge showed improved results by transferring the flexor carpi radialis to extensor digitorum communis through a window in the interosseous membrane.

In 1990 a prospective trial was started at Groote Schuur Hospital using both these methods. The purpose of this trial was to compare the functional results looking at (1) radial deviation of the wrist; (2) restriction of wrist flexion; (3) inadequate thumb abduction; (4) finger extension; (5) grip strength.

13. *DR. A.G. ZINN: FINGERTIP AMPUTATIONS - A RETROSPECTIVE STUDY*

Different methods of treating fingertip amputations were compared.

A review of case notes was performed in 100 patients who sustained fingertip amputations whilst on duty. They were all managed by the same surgeon who employed the following techniques to close the wound: split skin grafting; local V-Y advancement flaps; re-attachment as a composite graft; and serial dressings. All patients underwent a rehabilitation program at the same centre.

Factors highlighted in the results are: healing time, time off work, procedure failures, salvage procedures and ultimate comfort and appearance of the healed finger.

14. *DRS. J.R. LINDSAY, L. VAN HEERDEN: EFFECTS OF INTERPOSED FIBRIN GLUE ON NERVE CONDUCTION VELOCITIES IN PERIPHERAL NERVE REPAIR*

There has been concern that interposed fibrin glue used in peripheral nerve repair may form a "sclerotic diaphragm that the growing axons will not be able to cross". (Egloff, Narakas and Bonnard, 1986). The ability of regenerating axons to cross a block of fibrin glue 5 mm in length has been presented recently. A follow up experiment was carried out to assess effects of interposed fibrin glue on nerve regeneration in terms of nerve conduction velocities.

Methods: Two groups of 8 Sprague Dawley rats underwent transection of the right sciatic nerve. Group 1 had the nerve ends separated by a gap of 5 mm, enclosed by a silicone tube. Group 2 had the same construct, but with the injection of fibrin glue (Tisseel, Immuno) into the tube, creating a solid cylinder of glue 5 mm in length between the nerve ends. Macroscopic regeneration of the sciatic nerve across the gap was seen in all cases. Results of nerve conduction studies showed a greater variability of results in the fibrin glue group, but no overall statistically significant difference between the 2 groups.

15. *DRS. C.S. LADAS, A.D. WIDGEROW: NEUROTISATION OF FULL THICKNESS VERSUS SPLIT THICKNESS SKIN GRAFTS*

Introduction: Controversy has reigned over decades about the preference of full thickness versus split thickness skin grafts with particular reference to return of tactile sensation.

This study aims to compare these 2 treatment parameters (plus normal skin as control) in terms of histologic assessment of neurotisation.

Method: Case studies involve the submission of examples of mature full thickness and split thickness skin biopsies for electron microscopic analysis.

These results are correlated with pre-biopsy clinical assessment and conclusions are drawn based on these findings.

16. *PROF. U. MENNEN, I. WILLIAMS: ARTHROGRYPOSIS MULTIPLEX CONGENITA: AN INTRA UTERINE LESION*

Arthrogryposis Multiplex Congenita (AMC) is defined as a congenital condition affecting muscles of the limbs which result in "deformed joints". The muscles are fibrotic, fewer in number and shortened causing the characteristic bilateral symmetrical deformities. The elbows are in hyperextension, wrists in flexion, thumbs adducted and flexed in the palm and fingers stiff and flexed.

The aetiology is still uncertain, but genetic and external factors have been implicated which produce the lack of muscle development and differentiation.

We present a pair of proven manozygotic (identical) twin boys of which only one brother suffers fully fledged AMC. This finding excludes any genetic aetiology and points to either an intra-uterine infection or less likely a chemical cause.

17. *MRS. I. EGGERS: THE EVALUATION OF FUNCTION OF THE FLAIL UPPER LIMB*

The Evaluation of Function of the Flail Upper Limb (EFFUL) is a system which measures in numerical terms the gain achieved through reconstructive surgery and hand therapy of patients with brachial plexus injuries and nerve lesions.

This EFFUL system measures practical, every day activities performed by the shoulder, elbow, fore-arm, wrist and hand. The ranking system (0-10) is based upon a classification of function, with a hierarchy of increasingly higher demands placed on function until normal healthy function has been achieved. These activities focus on two-handed co-ordination. The score is plotted on a visual star profile indicating clearly the gain obtained.

The presentation includes a brief outline of the method used, activities tested, testing tools and results achieved.

References:

1. Sedel, L (1988) "Editorial Comment". Clin Orth and Related Research, No 237 : 1-3.
2. Narakas, A O (1985). "Treatment of Brachial Plexus Injuries". International Orthopaedics (SICOT) 9 : 29-36.
3. Napier, J R (1956). "The prehensile movements of the Hand". JBJS Vol 38B No 4 : 902-913.

18. *MR. GEOFFREY HOOPER: PHOCOMELIA: CLASSIFICATION AND TREATMENT*

Phocomelia, a complex congenital intercalary longitudinal deficiency, accounts for less than 1% of all congenital upper limb anomalies. Not all cases can be attributed readily to categories in the standard type of classification and examples will be shown. Treatment options (surgical, prosthetic and training by therapists) will be reviewed in the light of long-term experience gained from survivors of the thalidomide disaster of 1961-2, together with more recent patients.

19. *DRS. J.R. LINDSAY, W.B. STUART: TOTAL EXCISION OF THE SCAPHOID: A REPORT OF EIGHT CASES*

This paper was presented as part of a memorial lecture in memory of the late Mannie Lunz in June 1994.

Under the influence of Mr Dwyer of Liverpool, Mr Lunz performed total excision of the scaphoid, without implant insertion, for selected cases of scaphoid non-union. A review of 8 of his cases of total excision of the scaphoid, with a range of follow up from 1 - 4 years, was carried out to assess the natural history of wrist function following this procedure. Results in terms of follow up X-ray changes, symptomatology and function are presented.

20. *DR. G. PSARAS: CONCHAL CARTILAGE INTERPOSITION ARTHROPLASTY*

Trauma to the hand leads many times to permanent function loss, especially if joint involvement is present.

The reconstructive options available for joint injuries are limited and most patients end up with an arthrodesis of the affected joint. Reconstruction is exceedingly difficult because of destruction of the joint mechanisms and because of cartilage damage.

In our small series of patients we would like to present another option for the reconstruction of small joints of the hand with the use of conchal cartilage arthroplasty.

We will be presenting our method, results and follow-up as well as the operative technique, patients rehabilitation and functional outcome.

21. *DRS. J.R. LINDSAY, M. CARIDES, J. CRAIG: DURA MATER ALLOGRAFT AS AN INTERPOSITIONAL MATERIAL: A REPORT OF TWO CASES*

Various materials have been interposed between bone ends to prevent pain or reankylosis, as in elbow excision arthroplasty, wrist distraction arthroplasty and in the treatment of radio ulnar synostosis. An ideal material should combine:

1. Ready availability in a sterile, pre-packed form
2. Ease of application
3. Avoidance of prolonging operative time
4. Avoidance of potential increased morbidity, inherent in harvesting autogenous material (e g fascia lata)
5. Eventual incorporation into the host tissue, a feature not found with artificial material (e g silicone sheeting has been associated with dislocation of the material)

Commercially available dura mater, widely used in various specialities as a tissue space filling material, fulfills many of the above criteria. Its successful use in a case of elbow excision arthroplasty and a case of post-traumatic radio-ulnar synostosis is described.

22. *MR. GEOFFREY HOOPER: CAMPTODACTYLY - SHOULD IT BE TREATED?*

Camptodactyly is not a diagnosis but a descriptive term for an appearance of the finger that may occur in many conditions. The relatively common, idiopathic variety affecting the little finger represents a challenge to the hand surgeon since the pathology is largely unknown and the results of treatment far from satisfactory in many cases. The assessment and treatment options will be discussed but a non-surgical approach is recommended in the majority of cases.

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