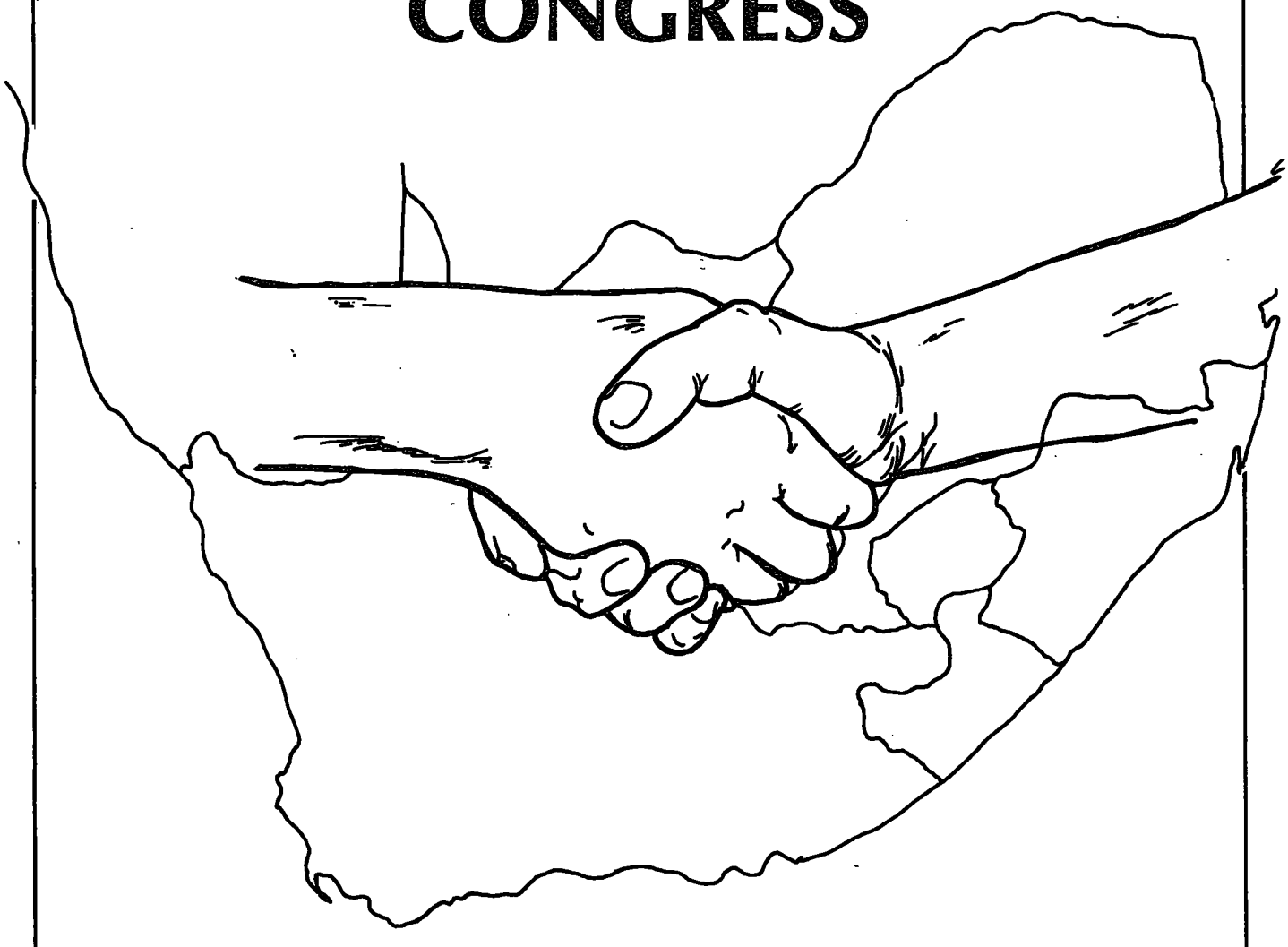
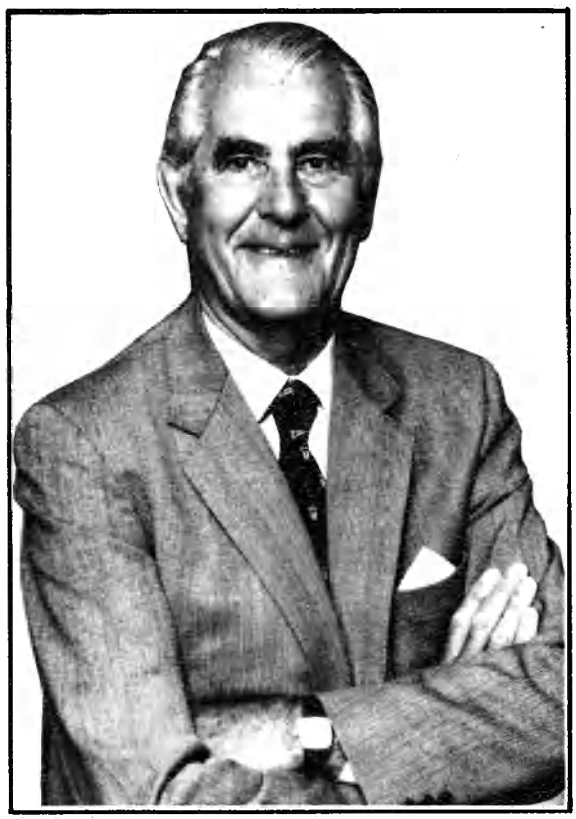
THE SA SOCIETY FOR SURGERY OF THE HAND

CONGRESS



DURBAN
1990



DOUGLAS W LAMB, MB, FRCS Ed

PRESIDENT
INTERNATIONAL FEDERATION OF SOCIETIES FOR SURGERY OF THE HAND

INTERNATIONAL GUEST LECTURER
at the
ANNUAL CONGRESS
of
THE SOUTH AFRICAN SOCIETY FOR SURGERY OF THE HAND

1 - 2 SEPTEMBER 1990
DURBAN

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
1985 - 1987	L K PRETORIUS
1987 - 1989	K S NAIDOO

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ADMINISTRATIVE SECRETARY/ ADMINISTRATIEWE SEKRETARESSE	HENDRIKA VAN DER MERWE

CONGRESS ORGANIZER
KONGRES ORGANISEERDER
1990

K S NAIDOO

ANNUAL GENERAL MEETING
ALGEMENE JAARVERGADERING

1 SEPTEMBER 1990

16:15 - 17:30

(members only/lede alleenlik)

Venue/Plek: North Ilanga

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
Proposed SASSH Dissociation from MASA
Voorgestelde SAVH Distansiering van MVSA

9
Announcement of President-Elect
Aankondiging van Pasverkose President

10
Announcement of new members
Aankondiging van nuwe lede

11
General
Algemeen

12
Next Annual General Meeting
Volgende Algemene Jaarvergadering

SOCIAL EVENTS
SOSIALE BYEENKOMSTE

1 SEPTEMBER 1990

19:00 for/vir 19:30

BANQUET/BANKET

(delegates and partners/
afgevaardigdes en metgeselle)

ATHLONE HOTEL
NORTHWAY
DURBAN

2 SEPTEMBER 1990

17:00 - 19:00

COCKTAIL PARTY

(delegates and partners/
afgevaardigdes en metgeselle)

EAST-NORTH ILANGA
ELANGENI HOTEL
DURBAN

CONGRESS
KONGRES

SATURDAY/SATERDAG 1 SEPTEMBER 1990

07:30 - 08:15	Registration/Registrasie Foyer: First Floor Elangeni Hotel DURBAN
08:15 - 08:20	Welcome and announcements Verwelkoming en aankondigings
08:20 - 10:00	Scientific presentations Wetenskaplike voordragte
10:00 - 10:30	Tea/Tee
10:30 - 13:00	Scientific presentations Wetenskaplike voordragte
13:00 - 14:00	Lunch/Middagete
14:00 - 15:40	Scientific presentations Wetenskaplike voordragte
15:40 - 15:45	Closure/Afsluiting
15:45	Tea/Tee
16:15 - 17:30	Annual General Meeting (members only) Algemene Jaarvergadering (slegs lede) (Venue/Plek: North Ilanga, Elangeni Hotel)
19h00	Banquet (delegates and partners) Banket (afgevaardigdes en metgeselle) (Venue/Plek: Athlone Hotel, Northway, Durban)

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

1 SEPTEMBER 1990

07:30 - 08:15 Registration/Registrasie
Foyer: First Floor
Elangeni Hotel
DURBAN

08:15 - 08:20 Welcome and announcements DR K S NAIDOO
Verwelkoming en aankondigings

CHAIRMAN/VOORSITTER: DR S L BIDDULPH

08:20 - 08:50 General Principles of Management of the Injured Hand
MR D W LAMB
08:50 - 09:00 Discussion/Bespreking

09:00 - 09:10 Home Programmes - An Extension to Hand Therapy
MISS C VAN VELZE
09:10 - 09:15 Discussion/Bespreking

09:15 - 09:25 The Use of Acupuncture and Low Power Laser in Conditions Affecting the Hand - MR C A LIGGINS
09:25 - 09:30 Discussion/Bespreking

09:30 - 09:40 The Metacarpal Hand: A goal not to be overlooked
DR J FLEMING
09:40 - 09:45 Discussion/Bespreking

09:45 - 09:55 Prostheses for transmetacarpal amputation are viable temporary or permanent alternatives to reconstructive surgery
MRS E NIEMAND
09:55 - 10:00 Discussion/Bespreking

10:00 - 10:30 TEA / TEE

CHAIRMAN/VOORSITTER: DR L K PRETORIUS

10:30 - 10:40 Tendon Transfer for Extensor Tendon Rupture at the Wrist in Rheumatoid Arthritis with Particular Reference to Transfer of Extensor Pollicis Brevis to Extensor Pollicis Longus - DR R JAFFE, PROF I D LEARMONTH
10:40 - 10:45 Discussion/Bespreking

10:45 - 10:55 A Comparison of Polydioxanone (PDS) and Nylon in Tendon Repair - DRS R F SPENCER, B WESSELS, M GREGORY
10:55 - 11:00 Discussion/Bespreking

11:00 - 11:10 Extensor Pollicis Longus Opponens Plasty: A New and Effective Technique - PROF U MENNEN
11:10 - 11:15 Discussion/Bespreking

11:15 - 11:25 Basal Joint Arthritis - DR J C FOUCHE
11:25 - 11:30 Discussion/Bespreking

11:30 - 11:40 Concomitant Radio-carpal and Mid-carpal Dislocation DRS R F SPENCER, W J BRUNNER
11:40 - 11:45 Discussion/Bespreking

11:45 - 11:55 An Arthroscopic Study of the Wrist Joint - DR N FREED
11:55 - 12:00 Discussion/Bespreking

12:00 - 12:10 Chronic Dislocation of the PIP Joint - DR I E GOGA
12:10 - 12:15 Discussion/Bespreking

12:15 - 12:25 A Comparison of the Effects of 1.5 and 3 hours Tourniquet Time on Skeletal Muscle - DRS M MARS, M GREGORY
12:25 - 12:30 Discussion/Bespreking

12:30 - 12:40 Therapy and Oedema: Yes, No, Maybe? (The Effectiveness of Occupational Therapy in the Treatment of the Hand) MISS J EXTER
12:40 - 12:45 Discussion/Bespreking

12:45 - 12:55 A Volumetric and Pressure Study of the Radiocarpal Joint - DR N FREED
12:55 - 13:00 Discussion/Bespreking

13:00 - 14:00 LUNCH/MIDDAGETE

CHAIRMAN/VOORSITTER: DR K S NAIDOO

14:00 - 14:15 Synthes Travelling Fellowship: Report Back on Overseas Travel - DR A MATIME

14:15 - 14:45 Nerve Compression Syndrome in the Upper Limb MR D W LAMB
14:45 - 14:55 Discussion

14:55 - 15:05 Significant Brachial Plexus Injury following Median Sternotomy - DRS I SANPERA, D HUDSON, M SINGER, R BOOME
15:05 - 15:10 Discussion/Bespreking

15:10 - 15:20 Entrapment Neuropathy of Ulnar Nerve at the Elbow: 46 cases - DRS R NACHEF, S BIDDULPH, E SCHNAID
15:20 - 15:25 Discussion/Bespreking

15:25 - 15:35	Carpal Tunnel Syndrome in Black Paraplegic Patients DR D F RODSETH
15:35 - 15:40	Discussion
15:40 - 15:45	Closure of Congress/Afsluiting van Kongres DR S L BIDDULPH
15:45	TEA/TEE
16:15 - 17:30	Annual General Meeting (members only) Algemene Jaarvergadering (slegs lede) (Venue/Plek: North Ilanga, Elangeni Hotel)
19:00	Banquet (delegates and partners) Banket (afgevaardigdes en metgeselle) (Venue/Plek: Athlone Hotel, Northway, Durban)

INSTRUCTIONAL COURSE
OPKNAPPINGSKURSUS

SUNDAY/SONDAG 2 SEPTEMBER 1990

presented by/aangebied deur

D W LAMB, Esq
President: IFSSH
EDINBURGH
UK

and/en

SOUTH AFRICAN PANEL

consisting of
bestaande uit

S L BIDDULPH, C BLOCH, R BOOME, E BOWEN-JONES
J FLEMING, I E GOGA, A W B HEYWOOD, U MENNEN, K S NAIDOO,
L K PRETORIUS, J YOUNGLESON, B J v R ZEEMAN

Course Co-Ordinators: I E Goga
D W Lamb
K S Naidoo

08:30 - 09:00	Registration/Registrasie Foyer: First Floor Elangeni Hotel DURBAN
09:00 - 09:40	Congenital Abnormalities of the Hand MR D W LAMB
09:40 - 10:45	Congenital Hands Clinical case presentation and discussion
10:45 - 11:15	TEA
11:15 - 11:45	Indications for Early Surgery in Rheumatoid Arthritis of the Hand MR D W LAMB
11:45 - 13:00	Rheumatoid Arthritis of the Hand Clinical case presentation and discussion

13:00 - 14:00	LUNCH
14:00 - 14:30	Tendon Transfers and Reconstruction following Trauma in the Upper Limb and Hand MR D W LAMB
14:30 - 15:45	Reconstruction following Trauma in the Upper Limb Clinical case presentation and discussion
15:45 - 16:15	TEA
16:15 - 16:35	Injuries to the Fingertip MR D W LAMB
16:35 - 16:55	Fingertip Injuries Panel discussion
16:55 - 17:00	Closure
17:00 - 19:00	Cocktail Party East-North Ilanga Elangeni Hotel (delegates and partners/afgevaardigdes en metgeselle)

SUMMARIES
OPSOMMINGS

General Principles of Management of the Injured Hand

D W LAMB

Home Programmes - An Extension to Hand Therapy

MISS C VAN VELZE

Due to ever increasing economic difficulties, private patients cannot afford daily hand therapy. Hospital patients can only be admitted for the initial, acute phase and are discharged as soon as possible. The majority of hand patients need to return to work as soon as they can, otherwise they are in danger of losing their jobs. Therefore, the hand injured patient needs to assume more and more responsibility for his own hand therapy.

In order to address this problem, a comprehensive home programme was set up. It consists of separate sheets of paper with instructions on wear and care of splints; sensory rehabilitation; desensitisation; exercises and activities for the different joints. The sheets are combined with helpful gadgets and materials such as a Bunnell block; finger flexion apparatus; inexpensive adapted games, clamps and salt dough.

The therapist assesses the patient, records the relevant data and plans a treatment programme. She then selects the appropriate exercise sheets and combines this with activities suitable for the patient's age, sex and interests. In this way the programme is tailored to suit the patient and he/she is instructed in the use of the home programme. Follow-up dates are made and the patient is evaluated and the programme adjusted.

The use of these home programmes have been found to be extremely useful in a private practice, as well as a hospital outpatient setting. The home programme kit will be discussed and presented as a valuable asset to therapy. The concept can be of great use to the hand surgeon who does not have the opportunity to refer patients to a hand therapist and needs to assume this responsibility himself.

The Use of Acupuncture and Low Power Laser in Conditions Affecting the Hand

C A LIGGINS

Acupuncture and low power laser were introduced into the Physiotherapy Department of King Edward VIII Hospital, Durban during 1983. In the last seven years almost 2 000 patients have been treated with one or other of these modalities. The conditions treated have been mainly musculo-skeletal disorders characterised by pain and many of these have responded to acupuncture or laser after initial conventional treatment, medical and physiotherapeutic had produced disappointing results.

About 10% of conditions met with in the Department are those affecting the hand. These conditions are mainly of a traumatic origin though a fair number of patients with rheumatoid arthritis have been seen.

This paper deals with the management of amputation stump pain and the pain of traumatic scars. A method of dealing with pain following reconstructive surgery of flexor tendons of the hand is also described.

The results of three pilot studies of laser therapy used for the management of painful scars and rheumatoid arthritis of the hands are discussed and the mechanisms of working of low power laser are elucidated.

The Metacarpal Hand: A Goal not to be overlooked

J H FLEMING

Loss of all the fingers is regarded by compensation authorities as 50% of the upper limb. But these severely compromised hands can be made very functional with careful planning and skillful surgery.

Causes:
1. Congenital
2. Amputation
3. Crush
4. Burn

The aim of reconstruction is tactile pinch. The reality is small objects only.

Plan
- creation of mobile tactile thumb
- provide an adequate first web, even if it means removing 2nd metacarpal
- release of scar contracture

Reconstruction is often difficult and will utilize all the various skills of the hand surgeon, such as

amputation
osteotomy
pollicisation
distal flaps
transplantation

but the results are very gratifying.

Prostheses for transmetacarpal amputation are viable temporary or permanent alternatives to reconstructive surgery

MRS E NIEMAND

Twelve subjects who suffered transmetacarpal amputations and received opposition post prostheses were surveyed to establish how they functioned in the work environment.

Aspects that were surveyed included:

1. Type of work person returned to
2. Ability to perform the work
3. Patient's work habits before and after injury
4. Reasons for employer re-employing worker
5. Attitudes of fellow workers

Problems encountered in the wearing of prostheses and problems with design of the prosthesis are discussed. The role a prosthesis may play as a temporary measure while the patient is counselled and prepared to consider reconstructive surgery such as a toe to hand transfer is also discussed.

Tendon Transfer for Extensor Tendon Rupture at the Wrist in Rheumatoid Arthritis with particular reference to Transfer of Extensor Pollicis Brevis to Extensor Pollicis Longus.

R JAFFE, I D LEARMONTH

Fifty five patients with 132 extensor tendon ruptures were treated by tendon transfer in 48 cases of rheumatoid arthritis and 7 cases of juvenile chronic arthritis from 1975 to 1988. The rupture occured at the wrist level in the majority of cases. Concomitant surgery included excision of the ulnar head in 36 cases and arthrodesis of the wrist in 8. There was a low complication rate and in over 90% of cases an excellent result was obtained with good extension and flexion of the affected digit. In 20 cases extensor pollicis longus rupture was treated by transfer of the extensor pollicis brevis. The operation is simple and excellent results were achieved in 95% of cases. Transfer of extensor pollicis brevis is not as widely recognised as the standard extensor indicis proprius transfer. Besides its ease of execution it has the additional advantage of sparing extensor indicis for use in treating concomitant rupture of other extensor tendons that commonly occur. This transfer has much to commend itself in the treatment of rupture of extensor pollicis longus.

A Comparison of Polydioxanone (PDS) and Nylon in Tendon Repair

R F SPENCER, B WESSELS, M GREGORY

Using a feline model designed to ensure early tensile loading to the repair, transverse cuts were created in the soleus tendon in 21 experimental animals and then repaired using a Kessler stitch of PDS on the right side and nylon on the left. The repairs were splinted by suturing the soleus some distance above and below the repair to the gastrocnemius using chromic catgut which, it was anticipated, would support the repair for 3 weeks. Active plantar flexion was retained in all cases for the duration of the study.

The tendons were harvested at 90 days (10 cases) and 120 days (11 cases) and the incidence of rupture, the gross diameter and the light and electron microscopic features of the repairs noted.

Partial rupture (separation less than 1cm, greater than 0,5cm) occurred in 4 tendons repaired with nylon, compared with only 1 repaired with PDS. Complete rupture occurred in 3 tendons repaired with nylon, but never in those repaired with PDS. There was no significant difference in gross diameter measurements when left and right sides were compared (mean left = 2,86mm; mean right = 2,93mm).

On light microscopy both nylon and PDS were seen to provoke a comparable foreign body granulomatous reaction, and the scar appearances on electron microscopy (EM) were identical, consisting of parallel bundles of collagen fibres.

A conspicuous feature of nearly all repairs was a degree of attenuation in thickness of the tendon at the point of healing.

Our results indicate that PDS may be superior to nylon for repairing tendons likely to be subjected to early tensile loading.

Extensor Pollicis Longus Opponens Plasty: A new and effective technique

U. MENNEN

The motion of opposition of the thumb is a complex combination of extension, abduction and rotation in order to oppose the fingers. The many various techniques described to re-establish opposition in paralysis of the thenar muscles of the thumb do not all combine these modes of movement. A new technique of opposition is described, utilising the extensor pollicis longus, which combines all of the above movements.

The technique consists of EPL tenotomy at the thumb MP joint level, retrieval of the tendon plus minus 10cm proximal to the wrist, tunnelling of the EPL tendon through the interosseous membrane to exit ulnar to the flexor tendons, but radial to the A. ulnaris. The tendon is then tunnelled subcutaneously towards the thumb MP joint, underneath the extensor pollicis brevis tendon and finally to be re-sutured to the distal stump of the EPL overlapping 5mm.

Thirty five cases are reported, with excellent results in 26 cases, good in 5, fair in 2 and poor in 2 cases. Technical points to prevent poor results are highlighted.

This technique of EPL opponens plasty can with confidence be recommended as a simple, safe and effective technique to regain the function of opposition. If done correctly, a good functional result can be expected in at least 90% of cases.

Basal Joint Arthritis

J C FOUCHE

The basal joint of the thumb is the single most important joint in the hand for normal hand function because it is the foundation for the thumb and its function.

Arthritis in this joint is fairly common and will lead to early and severe functional limitation due to chronic pain, instability and first web contracture.

The treatment of this condition seems to be a difficult problem and there seems to be no clearcut solution. Various different procedures are advocated but none provides a solution to all the cases. We reviewed the literature and our own results and made the following recommendations:

A. Fusion

1. For the high demand hand in the younger patient
2. Post trauma and sepsis
3. Immobile patient

B. Ligament construction with tendon interposition (Eaton and Burton technique)

1. Osteoarthritis: The younger patient or the elderly group with a high demand hand
2. Late traumatic arthritis

C. Swanson / Toe Implant Arthroplasty

1. Osteoarthritis: Low demand hand and the elderly group patients
2. Rheumatoid

Concomitant Radio-carpal and Mid-carpal Dislocation

R F SPENCER, W J BRUNNER

We present a case of an unusual carpal injury which involved components of a lunate dislocation as well as a dorsal mid-carpal dislocation.

The patient was taken to theatre and through a combined volar and dorsal approach the lunate was replaced in its correct position and the distal carpal row with half of the scaphoid re-aligned with the proximal row. The luno-capitate, luno-triquetal and radio-carpal joints were stabilised with 'K' wires. A satisfactory reduction of the scaphoid was obtained.

The injury we describe is extremly unusual in that it represents both components of a carpal dislocation. It is generally accepted that a lunate dislocation represents the end stage of a mid-carpal dislocation. However, in this case both elements were present. The distal carpal row was dislocated dorsal to the forearm bones and the lunate and half of the scaphoid were sequestrated superficial to the flexor tendons. Despite this massive displacement a satisfactory result appears to have been obtained.

An Arthroscopic Study of the Wrist Joint

N FREED

Fifty wrists in twenty five fresh cadavers have been arthroscopically examined. Structures were identified and arthroscopically marked. All wrists were subsequently dissected and the arthroscopic findings confirmed or negated.

By this investigation -

1. The arthroscopic anatomy has been identified, confirmed and demonstrated
2. A technique is suggested
3. Therapeutic possibilities are explored
4. Indications defined

Chronic Dislocation of the PIP Joint

I E GOGA

This paper reviews five cases of chronic dislocation and chronic fracture dislocation of the PIP joint. The paper highlights the difficulties experienced in the surgical treatment of this injury. The case studies are used to show various techniques used and a review of the literature is given.

The conclusion emphasizes the best treatment - correct diagnosis initially after the acute injury and conservative treatment.

A Comparison of the Effects of 1.5 and 3 Hours Tourniquet Time on Skeletal Muscle

M MARS, M A GREGORY

Ninety minutes of tourniquet induced ischaemia is generally considered safe for limb surgery. Using a histochemical morphometric method, we have reported a significant increase in the diameter of type 1 myofibres following 90 minutes of tourniquet ischaemia and 3 hours reperfusion. The subsequent fate of the various myofibres during reperfusion is unknown. The aim of this study was to investigate the differential response of skeletal myofibres to reperfusion following 1.5 and 3 hours of tourniquet ischaemia.

METHOD

Sixteen vervet monkeys were studied under general anaesthesia. A hindlimb was exsanguinated with an Esmarch bandage and a pneumatic tourniquet applied to the thigh at 100 mmHg above the systolic pressure for either 90 minutes or 3 hours. Open muscle biopsies were taken from tibialis anterior prior to tourniquet application in all animals. Further biopsies were taken at various of the following times: just prior to tourniquet release, and at 3,6,12,18 and 24 hours after tourniquet release. No animals had more than four biopsies taken. Control biopsies were taken from the opposite tibialis anterior in four animals. Frozen sections of all the biopsies were made and the myofibres identified by histochemical staining for ATPase activity. The diameters and inter fibre distances of a minimum of 200 fibres per specimen were measured using an image analyser.

RESULTS

- 1.5 Hour Tourniquet

  A transient increase in cross sectional area of all fibre types was seen. This was maximal after three hours reperfusion and returned to pre-ischaemic values within 24 hours. The average increase in Type 1 fibres was 37,6% and in type 2b fibres 20,4%. No cell lysis was noted. Inter fibre distances had increased an average 62,8% after three hours and 58,8% at 24 hours.

- 3 Hour Tourniquet

  Type 1 fibres showed an average increase in cross sectional area of 24,3% after 3 hours reperfusion, which remained relatively constant, being 23,9% at 24 hours. No cell lysis was seen. Type 2a and 2b fibres swelled progressively, being maximal 22,6% at 6 hours in type 2a and 34,2% at 12 hours in type 2b fibres. Cell lysis of both fibre types was noted in subsequent biopsies, and the mean cross sectional areas fell, probably due to the disintegration

of the larger fibres. Mean inter fibre distances increased steadily during reperfusion, going from 30,3% at 3 hours to 87,9% at 24 hours.

CONCLUSIONS

1. The various skeletal myofibres respond differently to ischaemia and reperfusion
2. Ninety minutes of ischaemia appears to cause a sublethal injury which maximally affects aerobic type 1 fibres
3. Three hours ischaemia can cause a lethal cellular injury and type 2a fibres appear to be most vulnerable during the first 24 hours of reperfusion
4. This model may be useful in the assessment of pharmacological prophylaxis of reperfusion injury

Therapy and Oedema: Yes, No, Maybe?
(The Effectiveness of Occupational Therapy in the treatment of the Hand)

MISS J EXTER

Oedema indicates an inflammatory reaction in the tissues and until it is brought under control, return of the injured extremity to a functional state remains questionable.

Reduction of oedema must therefore be vigorously pursued from the onset of the injury, as a relatively minor injury can ultimately become a major disabling condition.

Patients have been receiving therapy to reduce oedema, but the question which has arisen is this: How effective is occupational therapy in the reduction of oedema, or is the reduction which is seen simply part of the normal healing process?

A study has been designed to assess the effectiveness of therapy in three groups subjected to different therapeutic interventions over a span of five treatment sessions commencing immediately post injury.

Evidence from this study suggests that patients who needed only to loose a small amount of oedema did not benefit from any structured treatment programme, whereas those who needed to loose larger amounts benefitted greatly from a structured treatment programme.

This information therefore aids the hand team in selecting and assessing the necessity and urgency for treatment, promoting a speedy and successful recovery for the hand injured patient.

A Volumetric and Pressure Study of the Radiocarpal Joint

N FREED

The average volume of the radiocarpal joint in the normal adult wrist is between 3 and 5 millilitres, determined in the course of 130 arthrographic examinations and fifty cadaver studies. The injection of fluid into the normal joint produces a constant and predictable volume and pressure curve.

A new volumetric and pressure examination of the wrist is described which:

1. Is easy, quick and cheap to perform
2. Correlates well with the arthrographic findings
3. The curve pattern is indicative of the extent of the ligamentous lesion
4. Promises to be an useful adjunct in the investigation of the painful wrist

Nerve Compression Syndrome in the Upper Limb

D W LAMB

Significant Brachial Plexus Injury following Median Sternotomy

I SANPERA, D HUDSON, M SINGER, R BOOME

Significant brachial plexus injury following median sternotomy is uncommon. However, these patients experience considerable morbidity and their return to work is often delayed. The pathogenesis of the injury is unclear.

METHODS

The records of patients presenting to the Hand Clinic at Groote Schuur Hospital with significant brachial plexus injury after median sternotomy between 1986 and 1988 were analysed. During this period 1415 median sternotomies were performed.

RESULTS

Three patients were noted to have significant brachial plexus injury. The mode of presentation, management and outcome for each patient is described. The mean delay before work was recommenced was 5 months.

CONCLUSION

Significant brachial plexus injury following median sternotomy is uncommon, but is associated with considerable patient morbidity. Management is conservative and is best conducted by a team experienced in upper limb/hand surgery.

Entrapment Neuropathy of Ulnar Nerve at the Elbow: 46 Cases

R NACHEF, S L BIDDULPH, E SCHNAID

Our retrospective study is carried out, with 9 years follow-up, on 46 cases of cubital tunnel syndrome. Our findings illustrate the following aspects:

- Age and sex
- Clinical presentation
  - sensory deficit
  - power loss
  - Tinel sign
- Associated pathology
  - trauma
  - OA
- Radiological findings
- EMG testing
- Treatment
  - conservative
  - surgical: Osborn's release
    + transposition
    * operative findings
- Results and follow-up
- Conclusion

Carpal Tunnel Syndrome in Black Paraplegic Patients

D F RODSETH

The vastly increased incidence of carpal tunnel syndrcme in paraplegics has been reported and incidences of 50-60 percent are qLoted.

Various aetiologies are proposed.

The low incidence of carpal tunnel syndrome in black patierts is well-known.

The aim of this study was to determine the incidence of this problem in black paraplegics.

A series of 50 patients were examined and it was founc that the incidence of signs and symptoms of carpal tunnel syndrome in black paraplegic patients remains extremely low.

This supports the pressure theory of carpal tunnel syndrome in paraplegics and may indicate the reason for the low incidence of carpal tunnel syndrome in normal black patients.

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