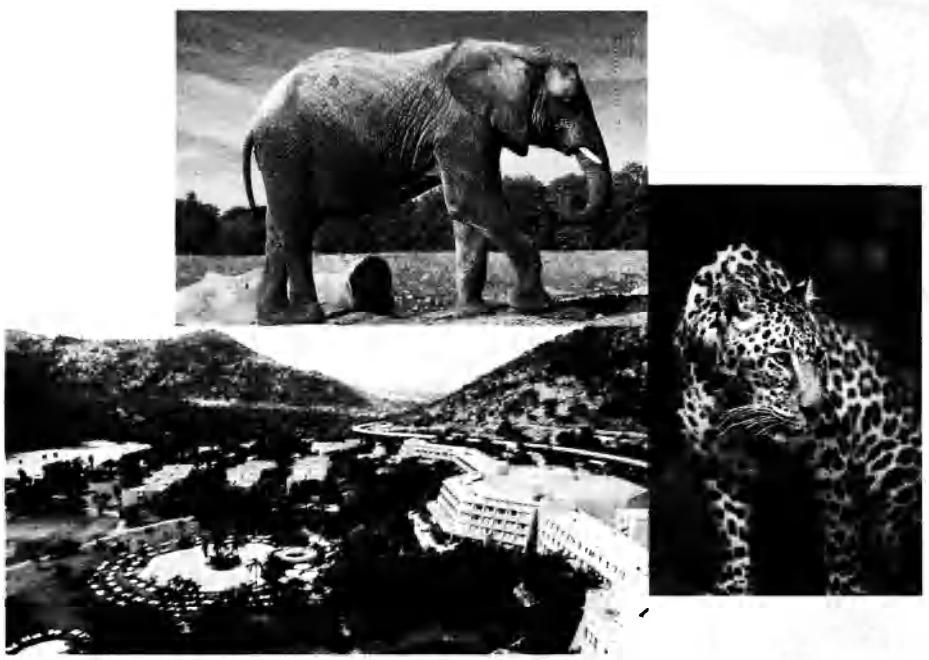
The South African Society for Surgery of the Hand

Die Suid-Afrikaanse Vereniging vir Handchirurgie



Congress 32 Kongres

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THE SOUTH AFRICAN SOCIETY
for
SURGERY
of the HAND

DIE SUID-AFRIKAANSE VERENIGING
vir
HANDCHIRURGIE

Congress 32 Kongres

01 – 02 September 2001
SUN CITY

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INHOUDSOPGAWE

MESSAGES OF WELCOME

DR LT (Wikus) DE JAGER
PRESIDENT
THE SOUTH AFRICAN SOCIETY FOR
SURGERY OF THE HAND

Dear Delegates

Welcome to the 32nd Annual Congress and Instructional Course at Sun City.

Our invited guest lecturer is Prof John K Stanley from Wrightington in the United Kingdom. He has a special interest in the wrist and rheumatoid arthritis. He kindly agreed to a 2-week pre-congress tour to all our universities. He is a dynamic presenter and an example to us all. We appreciate his hard work and effort in visiting us.

I would also like to welcome Dr Timothy Herbert and Prof Jesse Jupiter. We are indeed fortunate to have three wrist experts of international standing at our Annual Congress.

I would like to thank Drs Michael Carides, John Fleming, Wally Stuart and Mrs Hendrika van der Merwe for organisation of the congress.

I would like to thank all our members for attending the congress and supporting The South African Society for Surgery of the Hand.

Wikus de Jager

DR MICHAEL CARIDES
CONGRESS CHAIRMAN

It is with great pleasure that I welcome you to Sun City for this, the 32nd Annual Congress and Instructional Course of The South African Society for Surgery of the Hand.

We are privileged this year to have John Stanley (UK), Timothy Herbert (France) and Jesse Jupiter (USA) as invited guest speakers. On behalf of the Society I would like to thank them for taking time out of their busy schedules to visit us. We look forward to their participation and hope their visit will be an enjoyable and memorable one.

I am grateful to the members of the organising committee who have done their best to put together a varied and interesting scientific programme. This includes a hands-on workshop following the Instructional Course. We trust you will also take a little time out to relax and savour some of the other local attractions this popular venue has to offer.

I wish you all an enjoyable Congress and a pleasant stay at Sun City.

INTERNATIONAL VISITOR

Prof John K Stanley

PAST PRESIDENTS / VORIGE PRESIDENTE

1969 – 1971	I Kaplan
1971 – 1973	AC Boonzaier
1973 – 1975	M Singer
1975 – 1977	JH Youngleson
1977 – 1979	TL Sarkin
1979 – 1981	CE Bloch
1981 – 1983	SL Biddulph
1983 – 1985	WMM Morris
1985 – 1987	LK Pretorius
1987 – 1989	KS Naidoo
1989 – 1991	SL Biddulph
1991 – April 1992	BJ van R Zeeman
April 1992 – 1993	SL Biddulph
1993 – 1995	JH Fleming
1995 – 1997	U Mennen
1997 – 1999	EJ Bowen-Jones

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KONGRES 2001 ORGANISERENDE KOMITEE

Michael Carides
John Fleming
Wally Stuart
Hendrika van der Merwe

ANNUAL GENERAL MEETING
ALGEMENE JAARVERGADERING

SATURDAY 01 SEPTEMBER 2001
16:15 – 17:00
(Members only/Lede alleenlik)
SUN CITY

1
Welcome Address by the President
Verwelkoming deur die President

2
Apologies and Proxies
Verskonings en Volmagte

3
Election of two Scrutineers
Benoeming van twee Natellers

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 Increase in Entrance Fee and Annual Subscription
Voorgestelde Verhoging in Intreefooi en Jaargeld

9
Announcement of Executive Committee
Aankondiging van Uitvoerende Komitee

10
Membership / Lidmaatskap

11
General / Algemeen

12
Next Annual General Meeting
Volgende Algemene Jaarvergadering

SOCIAL EVENT
SOSIALE BYEENKOMS

01 September 2001
19:00: Dinner
Peninsula Restaurant, Cascades Hotel
Dress: Smart Casual

2002 COURSES AND CONGRESSES
2002 KURSUSSE EN KONGRESSE

1. *AO International Advanced Hand Course*
   6 – 9 March
   Pretoria
   Seats will be limited to 60 delegates
   (Details of registration and costs involved will be communicated in the near future)

2. *Annual Refresher Course*
   Topic: Trauma
   10 – 11 March
   Pretoria
   (Details to follow later)

3. *33rd Annual Congress and Instructional Course*
   31 August – 01 September
   Bloemfontein

GENERAL INFORMATION
ALGEMENE INLIGTING

Congress Venue	Sun City Convention Centre, Sun City
Cell Phones / Bleepers	All cell phones and bleepers should be turned off during conference sessions
Information Desk	Please feel free to visit the Information Desk should you require any assistance
Smoking	In accordance with new Government Legislation regarding smoking in public areas, kindly note that the following is applicable at Sun City: Smoking is now only permitted in outside areas, in the Gaming Floors and Harlequins (Sun City Hotel). No smoking is permitted elsewhere, including all Sun City Banqueting Rooms
Teas and Lunches	Will be served in the trade exhibition area
Parking	Ample parking at the venue

Please wear your name tag at all times

SCIENTIFIC PROGRAM

CONGRESS
SATURDAY 01 SEPTEMBER 2001

07:30-08:00	Registration	
08:00-08:10	Welcome and Announcements	*Dr LT (Wikus) de Jager, President: SASSH*
SESSION 1	**CHAIRMAN: DR LT DE JAGER**	
08:10-08:35	The Indications and Role of Diagnostic Arthroscopy atf the Wrist	*Prof JK Stanley*
08:35-08:45	Discussion	
08:45-08:55	Wrist Arthrodesis using a Titanium Wrist Fusion Plate	*Dr A Barrow*
08:55-09:00	Discussion	
09:00-09:10	Triradiate Fibrocartilage Injury as a Cause of Wrist Pain	*Dr C Ackermann*
09:10-09:15	Discussion	
09:15-09:25	Kiënbock's Disease in an 8-year Old Boy: Is this a Different Disease?	*Dr M Solomons*
09:25-09 30	Discussion	
09:30-09 40	The Pectoralis Minor Tendon Transfer for Winging of the Scapula	*Dr C Butcher*
09:40-09.45	Discussion	
09:45-09 55	End-to-Side Nerve Suture (ETSNS) in Clinical Practice	*Prof U Mennen*
09:55-10:00	Discussion	
10:00-10:30	TEA	
SESSION 2	**CHAIRMAN: PROF U MENNEN**	
10:30-10:40	Does the Congenital Amputee Need a Prosthesis	*Dr LT de Jager, Ms K Weskamp*
10:40-10:45	Discussion	
10:45-10:55	One Stage Shoulder Arthrodesis and Biceps Tendon Transfer	*Dr M Solomons*
10:55-11:00	Discussion	
11:00-11:10	The EIP to First Dorsal Interosseous Transfer to Restore Key Pinch	*Dr C Butcher*
11:10-11:15	Discussion	
11:15-11:25	A New Technique in the Treatment of Gunshot Radius and/or Ulna by Means of Minimal Exposure Plating	*Dr A Barrow*
11:25-11:30	Discussion	
11:30-11:40	Our Experience with End-to-Side Nerve Repair	*Dr CH Pienaar*
11:40-11:45	Discussion	
11:45-11:55	The Pattern of Rheumatoid Involvement of the Hand and Wrist in Black Patients – A Radiological Study	*Prof NGJ Maritz*
11:55-12:00	Discussion	
12:00-12:10	Biomechanics and Splinting of the CMC Joint of the Thumb	*Ms J Exter*
12:10-12:15	Discussion	
12:15-12:25	Tendon Transfers for the Posterior Interosseous Nerve Palsy – Our Experience and Modifications	*Dr N Kruger*
12:25-12:30	Disucssion	
12:30-13:30	LUNCH	
SESSION 3	**CHAIRMAN: DR M CARIDES**	
13:30-14:15	A General Overview of Medicolegal Litigation in South Africa	*Mr BJL de Beer*
14:15-14:30	Discussion	
14:30-14:50	Proximal Interphalangeal Joint Replacement – Current State of the Art	*Prof JK Stanley*
14:50-15:00	Discussion	
15:00-15:30	TEA	
SESSION 4	**CHAIRMAN: DR W STUART**	
15:30-15:40	An Unusual Cause of Ischaemic Necrosis of the Hand – A Report of 2 Cases	*Dr J Muller*
15:40-15:45	Discussion	
15:45-15:55	Intramedullary K-Wire Fixation of "Boxer's Fractures"	*Dr A Barrow*
15:55-16:00	Discussion	
16:00-16:10	Late Presentation of a Forearm Injury and its Impact on Hand Function – A Case Study	*Ms K Weskamp, Ms L Dawe*
16:10-16:15	Discussion	
16:15-17:00	Annual General Meeting	

19:00 for 19:30	SASSH Dinner: Peninsula Restaurant, Cascades Hotel (Smart Casual)	

INSTRUCTIONAL COURSE

SUNDAY 02 SEPTEMBER 2001

08:00-08:30	Registration	
SESSION 5	**CHAIRMAN: PROF S BIDDULPH**	
08:30-08:50	The Techniques and Problems of Wrist Arthrodesis	*Prof JK Stanley*
08:50-09:00	Discussion	
09:00-09:30	The Ulnar Head Prosthesis: A New Approach to Treatment of Disorders of the Distal Radio-Ulnar Joint	*Dr T Herbert*
09:30-09:40	Discussion	
09:40-09:55	Limited Neurectomy of the Wrist – Indications, Techniques and Results	*Prof JK Stanley*
09:55-10:00	Discussion	
10:00-10:30	TEA	
SESSION 6	**CHAIRMAN: DR JJ VAN WINGERDEN**	
10:30-11:05	The Assessment and Planning of Surgery of the Rheumatoid Hand	*Prof JK Stanley*
11:05-11:15	Discussion	
11:15-11:35	Carpo-Metacarpal Joint Arthrosis: What is the Best Buy?	*Prof JK Stanley*
11:35-11:45	Discussion	
11:45-11:55	Mycosis Fungoides (Cutaneous T-Cell Lynphoma) Confined to the Hand: A Case Report	*Dr MC Wells*
11:55-12:00	Discussion	
12:00-12:30	The AC Boonzaier Lecture	*Dr LT de Jager*
12:30-13:30	LUNCH	
SESSION 7	**CHAIRMAN: DR J FLEMING**	
13:30-13:50	Wrist Instability	*Dr T Herbert*
13:50-14:00	Discussion	
14:00-14:20	Scaphoid Fractures – An Update	*Prof J Jupiter*
14:20-14:30	Discussion	
14:30-14:40	Soft Tissue Reconstruction in Ligamentous Injuries of the Wrist	*Prof JK Stanley*
14:40-14:50	Discussion	
14:50-15:00	Closure	
15:00-15:30	TEA	
SESSION 8	Martin/Marcus Medical Workshop	
15:30-17:30	Venue: Eland Room	

SUMMARIES OF PAPERS

THE INDICATIONS AND ROLE OF DIAGNOSTIC ARTHROSCOPY AT THE WRIST

Prof JK Stanley

The indications for arthroscopy at the wrist are failure to arrive at a clear cut defined diagnosis, on the basis of the investigations performed as a routine. Those would include: history, clinical examination, routine x-rays, stress x-rays, arthrograms and cine radiology. One could include bone scans, MRI and CT. If, at the end of that, there is a severe difficulty in narrowing down the differential diagnosis then wrist arthroscopy is indicated. Arthroscopy is also indicated in those patients where the actual diagnosis is complete, but the severity of the changes of the wrist joint are not known, and they would themselves determine the prognosis. That would be true of non-union of the scaphoid, Kiënbock's disease, early SLAC wrist following scapho lunate interosseous ligament problems and ulnar abutment syndrome with significant changes within the lunate.

On each of these occasions arthroscopy is indicated as the diagnostic procedure. At the same time there are opportunities to provide for some therapeutic input once the extent and nature of the diagnosis is established. That can include trimming of the triangular fibro cartilaginous complex, synovectomy, radial styloidectomy, Felden wafer head of ulna excision. All of these can be done through the standard visualising portals of the interval between the extensor pollicis longus and the extensor digitorum communis (the so-called ¾ portal), the interval between the extensor digitorum communis and extensor carpi ulnaris (the 6R portal). The working portal is usually between EDC and EDM (the so-called 4/5 portal), and there are two mid-carpal portals, and there is an additional portal through the bed of the flexor carpi ulnaris (the so-called anterior portal). All of these are required from time to time. It is possible, during a diagnostic arthroscopy, to review almost all of the internal structures of the wrist, but there is no ability to identify any pathology outside the joint.

WRIST ARTHRODESIS USING A TITANIUM WRIST FUSION PLATE

Dr A Barrow; Dr P Webster; Prof S Biddulph

AIMS OF STUDY

The purpose of this study was to investigate the effectivity of a specifically designed titanium wrist fusion plate for use in wrist arthrodesis. The possibility of no or minimal casting post operatively was considered and an early return to function was another proposed benefit.

METHOD

Ten consecutive patients with pathology requiring wrist arthrodesis were subjected to wrist fusion by means of the titanium wrist fusion plate designed by Hill Hastings II M.D. In all 10 cases a similar technique was used securing the plate to the third metacarpal and the radius.

In all cases autologous bone graft was harvested from the patient's iliac crest. Time to union, time of immobilization and overall functional results were looked at. Patient satisfaction with the procedure was also documented.

RESULTS

In all 10 patients solid radiological union was documented between 8 and 12 weeks. The precontoured plates produce a satisfactory and consistent position of fusion when correctly applied.

Six of the 10 patients were managed with a light cast for 6 weeks post operatively. The other 4 patients were treated with no immobilization at all. There was no failure of fixation in this small series. In 1 patient with a preexisting transverse scar on the dorsum of the wrist a small area of skin necrosis occurred. This healed by secondary intention over a 4-week period.

CONCLUSION

The Hastings designed wrist arthrodesis plate provides a repeatable good method for wrist fusion. Although the longitudinal scar is longer than that necessary in some other techniques described and the carpo-metacarpal joint is included in the fusion, the overall level of patient satisfaction is high.

TRIRADIATE FIBROCARTILAGE INJURY AS A CAUSE OF WRIST PAIN

Dr C Ackermann

Wrist pain is a common complaint especially after trauma to the distal forearm. While most of us can give a reasonable differential diagnosis for pain on the radial side, pain on the ulnar aspect of the wrist is less well defined and discussed. The triradiate fibrocartilage (TFC) is a spacer between the carpal bones and the distal ulna. A tear of this structure will cause pain because of an incongruent surface that rubs against the carpal cartilage. The mechanisms of injury will be discussed as well as typical symptoms and signs with which the patient presents. Arthrogram, MRI and arthroscopy of the wrist are compared as special investigations of choice. Treatment is selective debridement or excision of the cartilage.

KIëNBOCK'S DISEASE IN AN 8-YEAR OLD BOY: IS THIS A DIFFERENT DISEASE?

Dr M Solomons, Dr R Endenberg

We report on a case of an 8-year old boy who presented with advanced lunatomalacia. He was treated by immobilisation only which resulted in almost normal restoration of the lunate architecture. A review the literature regarding Kiënbocks in children revealed only one other case also in an 8-year old. We suspect that, unlike adult onset Kiënbock's disease, lunatomalacia in the young child is a less sinister conditions with a more favourable outcome.

THE PECTORALIS MINOR TENDON TRANSFER FOR WINGING OF THE SCAPULA

Dr C Butcher, Dr M Solomons, Dr W de Jager

Paralysis of the serratus anterior causes wining of the scapula. This may present with pain, diminished shoulder function and cosmetic deformity. Reconstructive options include static scapulothoracic stabilisation or tendon transfer. The most commonly performed transfer utilises pectoralis major but other tendons have been used. We present our experience with the pectoralis minor transfer and a brief review of the literature.

END-TO-SIDE NERVE SUTURE (ETSNS) IN CLINICAL PRACTICE

Prof U Mennen

The phenomenon of lateral sprouting of axons into an end-to-side sutured recipient nerve is well documented. The exact nature, however, still needs much investigation.

Since 1996 we have been continuously involved in primate research as well as using this ETSNS method in clinical practice.

More than 55 patients with a variety of conditions have been operated, ranging from brachial plexus avulsion to digital nerve lesions.

From our experience it seems that the best results achieved are proximal motor re-innervation (e.g. biceps) and distal sensory re-innervation (e.g. volar skin of the hand).

The discussion will cover various aspects for ETSNS in the human patient, such as indications, parameters, technique and the importance of rehabilitation.

ETSNS restores function in conditions previously impossible to operate and replaces in many instances nerve grafting.

DOES THE CONGENITAL AMPUTEE NEED A PROSTHESIS?

Dr LT de Jager, Ms K Weskamp

OBJECTIVE
To the question the current internationally accepted wisdom of early prosthetic fitting in children with congenital transverse failure of formation in the forearm.

METHODS
The pros and cons of early prosthetic fitting in congenital amputees will be discussed. Case reports will be shown to question the recommendation of early prosthetic fitting in congenital amputees.

RESULTS
The absence of sensation in a prosthesis and the ability of the developing brain to adapt to the absence of a body part results in excellent function without a prosthesis. The child frequently tolerates a prosthesis during childhood but discards it during adolescence, when he is able to enforce his own will.

CONCLUSIONS
Due to the rareness of transverse failure of formation it is impossible for any hand surgeon today to build up a large prospective double blind series to challenge the conventional wisdom developed during the Thalidomide era. In my view the conventional wisdom should be challenged regarding prosthetic fitting in congenital transverse failure of formation in the forearm. I would like to request a multicenter functional assessment of these patients.

ONE STAGE SHOULDER ARTHRODESIS AND BICEPS TENDON TRANSFER

Dr M Solomons

Injury to the upper trunk of the brachial plexus is fairly common. These patients often require tendon transfers to restore elbow flexion and a shoulder arthrodesis to offer stability and to improve the biomechanics of the elbow flexion tendon transfer. Both these operations are lengthy and technically demanding. This paper presents the author's experience of 3 one stage shoulder arthrodesis with simultaneous Brookes / Seddon type elbow flexions tendon transfers.

THE EIP TO FIRST DORSAL INTEROSSEOUS TRANSFER TO RESTORE KEY PINCH

Dr C Butcher, Dr M Solomons, Dr LT de Jager

Ulna nerve palsy results in weakness of lateral key pinch and grip strength due to intrinsic paralysis. There have been many procedures described to restore key pinch, but there is no consensus as to the ideal tendon transfer. We present our results with traumatic ulna nerve palsy. We performed this procedure in fourteen patients between 1995 and 2000.

Prior to this an EIP adductor transfer and an extensor pollicis brevis abductor transfer was utilised to restore key pinch but was found to result in unacceptable narrowing of the first web.

Regarding the technique of EIP harvest, the literature suggests careful repair of the extensor hood over the index metacarpophalangeal joint to prevent extensor lag. We did not routinely perform this repair and have not found extensor lag to be a significant problem.

A NEW TECHNIQUE IN THE TREATMENT OF GUNSHOT RADIUS AND OR ULNA BY MEANS OF MINIMAL EXPOSURE PLATING

Dr A Barrow, Dr M Radziejiowski

AIM
With the prevalence of gunshot injuries in our society a new approach to the treatment of gunshot radius and or ulna was analysed. These fractures are often very comminuted and surgical exposure of the fracture site may render many previously viable bone fragments devoid of a blood supply. It was decided to look at a minimally invasive method of plating these fractures.

METHOD
A consecutive series of 9 patients with a diaphyseal gunshot of the radius or ulna or both was subjected to a 'percutaneous plating' procedure. This form of fixation acts as an internal form of 'external fixator'. Two surgeons performed the procedures.

RESULTS
At the time of submission of this abstract five of the six patients had gone on to complete clinical and radiological union. The sixth patient is still under follow up. The average time to full union was 12 weeks. The average pronation obtained was 60 degrees (20-80) and the average supination 50 degrees (10-70). In all patients full elbow and wrist movement was preserved.

CONCLUSION
Although this is a very limited series of patients it would appear that this method of treating gunshot injuries of forearm bones produces good results in injuries that are sometimes difficult to treat. The long-term affect on wrist function is difficult to predict. To date in this small series we have had no serious complications with no incidence of nerve injury, no sepsis and no radio-ulna synostosis.

OUR EXPERIENCE WITH THE END-TO-SIDE NERVE REPAIR

Dr CH Pienaar, Dr M Solomons, Dr LT de Jager

Balance and Harris was the first in 1903 to report an end-to-side nerve repair technique for the treatment of facial palsy. Owing to unsatisfactory results this technique was abandoned until 1992 when Viterbo reintroduced this method of nerve repair. Various authors have studied this interesting concept with conflicting results. Some have shown histological and/or electrophysiological evidence of both sensory and motor axon regeneration after end-to-side repair but functional results are mostly inadequate.

We present a paper on 19 cases of end-to-side nerve repair on 16 patients over a 16-month period (May 1998 to September 1999). Ages ranged from 13 to 61 years with an average of 32.6 years. Our indications for surgery were proximal lesions and when nerve grafting would have been required. 12/16 Procedures involved the extremities and 4 patients had brachial plexus surgery. Importantly our delay to surgery was an average of 6½ months with an average follow-up post surgery of 14 months. Mostly our results have been poor and we have now abandoned this technique for more traditional nerve grafting and other modes of nerve reconstruction.

THE PATTERN OF RHEUMATOID INVOLVEMENT OF THE HAND AND WRIST IN BLACK PATIENTS – A RADIOLOGICAL STUDY

Prof NGJ Maritz, Drs AJ Gerber, SJ Greyling, BB Bongani

PURPOSE
There is a clinical impression that rheumatoid involvement of the hand and wrist in black patients differs from white patients. The aim of this study was to look at the hand and wrist involvement in black patients and to compare it with the available series in white patients.

METHODS
The wrist and hand x-rays of 75 black patients with proven rheumatoid arthritis were used. The x-rays were classified according to the Larsen criteria. We also classified the wrist involvement according to the Stanley and Simmen classifications. We also looked at the extent of wrist involvement and the stability of the wrist.

RESULTS
Larsen count: Hand: MP-joint L 1,04 R 1,11
PIP-joint L 0,90 R 1,03
Larsen count: Wrist: L 3 R more or less the same.
If one excludes the 19 wrists with a Larsen of 0 and 1, the count is 4. According to the Stanley classification, half of the cases were in the conservative/reconstruction group and half in the salvage/irretrievable group. According to the Simmen classification, 40% were in the disintegrated group.

CONCLUSION

The wrist joint involvement in the black patient with rheumatoid arthritis is substantially more extensive than the hand involvement. Furthermore, the wrist is more extensively involved in black patients than in white patients.

BIOMECHANICS AND SPLINTING OF THE CMC JOINT OF THE THUMB

Ms J Exter

The anatomy of the CMC joint of the thumb allows us to perform numerous movements, which positions the thumb, preparing it and assisting it in performing a variety of functions necessary for daily hand function. There are four intrinsic thenar muscles – AP, OP, FPB and APB – which due to their nature are effective motors of the CMC joint. They draw the thumb into the palm and provide us with the power and control of the thenar eminence. The three extrinsics are – APL, EPB and EPL – which are less effective motors of the CMC joint. The thumb is therefore more loaded or inclined to flexion.

When disease and or injury affect the CMC joint one often finds the base of the first metacarpal subluxing dorsally, the shaft and the head of the first metacarpal then drift into an adducted position. The first web is effectively narrowed and functional problems raise their head.

In order for us to maintain hand function, we need to maintain the anatomy we were given and understand the biomechanics with which we are working. A soft pressure brace has been designed to oppose these deforming forces, to aid in maintenance of function and to some degree aid in correction of already narrowed first web spaces.

The principles behind the brace will be explored, the characteristics of the brace will be discussed and case studies to date will be shared. The brace in its current format has not yet been used for actual patients, however development of this brace has taken place over a number of months and earlier designs have showed favourable results in both maintenance of hand function as well as improvement in range and mobility of the first metacarpal.

TENDON TRANSFERS FOR THE POSTERIOR INTEROSSEOUS NERVE PALSY - OUR EXPERIENCE AND MODIFICATIONS

Dr N Kruger, Dr S Dix-Peek, Dr M Solomons, Dr LT de Jager

Tendon transfers for the radial posterior interosseous nerve can give excellent results especially as there is no sensory deficit of consequence and many authors would prefer tendon transfer in preference to nerve repair. Although tendon transfers in radial nerve lesions have been extensively studied, tendon transfers in the isolated posterior interosseous nerve lesion are less well documented.

With this in mind we present our management of 15 patients at Groote Schuur Hospital with isolated PIN lesions, using the standard techniques of tendon transfers. In particular we report on the routing of flexion carpi radialis around the ulnar border of the wrist, a modification we consider to be superior in terms of maintaining a balanced wrist.

A GENERAL OVERVIEW OF MEDICOLEGAL LITIGATION IN SOUTH AFRICA

Mr BJL de Beer

ABSTRACT NOT AVAILABLE

PROXIMAL INTERPHALANGEAL JOINT REPLACEMENT – CURRENT STATE OF THE ART

Prof JK Stanley

Although there have been a number of attempts at replacing the proximal interphalangeal joint, not a great deal has been written about the bio-mechanics, but it is clear that the proximal interphalangeal joint has a number of subtle aspects to it which make it behave very much like a knee, there being a requirement for flexion/extension and a certain amount of rotation. Although, in axial compression, this rotational capacity is lost. The results of the Swanson arthroplasty at the PIP joint have been very disappointing over time. Following early good results excresences and osteophytes form with sinkage of the implant and a progressive loss of motion.

A number of designs – the most recent being the metal plastic SRS and the pyrolytic carbon Ascension – have come on the market. The SRS joint is now in its second generation and the Ascension joint, made out of pyrolytic carbon has been recently released. Both of these joints attempt to provide a surface replacement, and both endeavour to avoid cement, which has had an adverse effect on the results of the Type I SRS joints. Currently, there are a number of linked hinges, partially linked hinges and unlinked components on the market. The trend is toward unlinked surface replacement. The early results of surface replacement prostheses are very encouraging.

AN UNUSUAL CAUSE OF ISCHAEMIC NECROSIS OF THE HAND – A REPORT OF 2 CASES

Dr JM Muller, Dr M Carides

AIMS

How accurate is the Allen's Test at assessing hand perfusion? To formulate guidelines for the treatment of ischaemia in the hand following radial artery cannulation.

METHOD

Presentation of two cases treated by the senior author between September and December 2000. Both patients underwent radial artery cannulation for monitoring of arterial blood pressure intra-operatively. Both had the Allen's test performed prior to the insertion of the cannula. Both had delayed presentations with irreversible ischaemia and necrosis of their radial digits, requiring amputation. Literature review of ischaemic necrosis following radial artery cannulation will be presented.

RESULTS

Twenty five percent of patients requiring radial artery cannulation for <20hrs develop thrombosis, with the number increasing to 93% with cannulation for >40hrs. Of these patients 10% develop ischaemic changes, 15% of these patients require either digit or hand amputation. There are a number of contributing factors to the severity of the complications encountered. These can be prevented by a thorough medical history, an accurate pre-op assessment with Allen's Test and Doppler, prophylactic Aspirin, atraumatic insertion of a 20G Teflon cannula, use of heparinised saline infusions only, retention of the cannula for the shortest possible time necessary with close monitoring for any signs of thrombosis or ischaemia and immediate removal of the cannula at the slightest positive sign. Histology specimens of the involved vessels show a vascular intimal injury.

CONCLUSIONS

It does not appear safe to rely on the Allen's Test alone. Careful monitoring, early intervention and aggressive treatment remain the mainstay of management in patients with peripheral arterial lines. The question remains: in those cases with ischaemia as a result of arterial lines, should a bypass graft be done primarily?

INTRAMEDULLARY K-WIRE FIXATION OF 'BOXER'S FRACTURES'

Dr A Barrow, Dr M Radziejiowski, Dr P Webster

AIM

The 'Boxer's fracture' is a common injury. Often these fractures are treated conservatively with acceptable functional results while leaving the patient with a residual deformity. A minimally invasive technique of treating these fractures was investigated.

METHOD
Twenty three consecutive patients with a fractured neck of the 5th metacarpal with a volar angulation exceeding 40° were offered treatment with a prograde intermedullary K-wire. All 23 patients accepted this treatment with informed consent. A 1,6 mm prebent K-wire was inserted via the base of the 5th metacarpal in each case. Time to regaining full function, time to union and final functional and radiological outcome were looked at.

RESULTS
All 23 patients went on to full clinical and radiological union within 6 weeks. In 18 patients the reduction was anatomical with no residual angulation. In 'y' the residual angulation ranged from 5-15° with an average of 8°. Two patients suffered a transient sensory neuropraxia.

CONCLUSION
The presented technique is a simple, cost effective and reliable method of treating a 'Boxer's fracture'. Although this type of injury can often be treated without surgery this procedure ensures a rapid return to full function with little or no residual ceformity.

LATE PRESENTATION OF A FOREARM INJURY AND ITS IMPACT ON HAND FUNCTION – A CASE STUDY

Ms K Weskamp, Ms L Dawe

The function of the hand is dependent upon many factors of which the integrity of the forearm is of vital importance. A high velocity injury to a patient's elbow and forearm in 1998 had a devastating effect on her everyday functioning.

The patient presented to us in March 2001 and was in South Africa for a limited period only. The rehabilitation challenge was to assess, initiate and develop an ongoing program with possibly no rehabilitation support when she got home.

This paper presents the problems and progress during this limited period of time.

THE TECHNIQUES AND PROBLEMS OF WRIST ARTHRODESIS

Prof JK Stanley

The wrist arthrodesis is a final and usually effective method of treating degenerative and inflammatory wrist disorders. The techniques for arthrodesing a rheumatoid wrist are wholly different from those for an osteo arthritic wrist.

In essence, for the rheumatoid, a simple intra-medullary pin (either using the Mannerfelt technique, the Stanley technique or the Clayton technique) is all that is required, with two pins for those patients with any instability. The use of staples across the joint can also help to obtain an arthrodesis. The union rate for these is in excess of 90%, and even those with a non-union have little in the way of symptoms because of the low demand created by the disease process itself.

In terms of osteo arthritis, nowadays the contoured titanium plate is preferred over a standard DCP plate, although one can use reconstruction plates if one wishes. There is no doubt that partial arthrodesis is favoured if there is a preserved mid carpal joint. Therefore, providing there is no stage 3 SLAC in any arthritic wrist, one can fuse a radius to the scaphoid and the lunate with a reasonable preservation of motion and significant pain relief. Chamay fusion is rarely required in the non-rheumatoid although can be performed for instability.

ULNAR HEAD PROSTHESIS: A NEW APPROACH TO TREATMENT OF DISORDERS OF THE DISTAL RADIO-ULNAR JOINT

Dr T Herbert

ABSTRACT NOT AVAILABLE

LIMITED NEURECTOMY OF THE WRIST – INDICATIONS, TECHNIQUES AND RESULTS

Prof JK Stanley

Wilhelm's original description of neurectomy of the wrist involved dividing the posterior interosseous nerve, the anterior interosseous nerve, the branches from the radial nerve and the ulnar nerve dorsal branches and volar branches, and the inter-metacarpal branches of the median nerve. This was not popular until Buck Gramcko, in the early eighties, popularised this by publishing a large series. Since then there have been a number of publications (both in the Scandinavian literature and in the English speaking literature and French speaking literature) all relating to the Wilhelm neurectomy.

In essence the division of only the anterior and posterior interosseous nerves, the major nerves to the wrist, is a limited neurectomy and has a specific part to play in radial sided wrist pain. Our policy is to perform an injection of the anterior and posterior interosseous nerves, with long-acting local anaesthetic, 1.5 cm proximal to the distal radial ulnar joint on the dorsal aspect of the wrist.

At that point it is possible to inject the posterior interosseous nerve, go through the interosseous membrane and inject the anterior interosseous nerve. The patient then keeps an hourly/day diary of their pain. If there is significant improvement of their pain scores, a limited neurectomy is performed through an incision centred on the same point as the injection. This is performed as a day case under local anaesthetic, with movement of the extensor tendons to one side the posterior interosseous nerve can be identified quite easily and 1.5 cm of that is removed. The interosseous membrane is then opened. A skin hook is then inserted and brought along the inferior surface of the interosseous membrane, thus bringing out and delivering the anterior interosseous nerve into the wound, that is a centimetre of that is then removed. The wound is closed and the patient mobilises immediately.

The results of that are extremely good in that the aphorism "70% of patients get 70% of relief of pain for 7 years" is probably true. Certainly, our patients who have had a good response to injection, have a much higher pain relief score, and also appear to be pain free in the short and medium term. Publications from Kleinert Institute in Louisville show that the pain starts to return at two years, although this is still within acceptable limits for many patients and can be a good temporising procedure while allows patients to adjust their lives and adjust their work schedules to suit their wrist's requirements. This particular technique, through a single dorsal incision, was described by Berger from the Mayo Clinic.

THE ASSESSMENT AND PLANNING OF SURGERY OF THE RHEUMATOID HAND

Prof JK Stanley

ABSTRACT NOT AVAILABLE

CARPO-METACARPAL JOINT ARTHROSIS: WHAT IS THE BEST BUY?

Prof JK Stanley

The age old procedure of trapeziectomy has stood the test of time and continues to be the baseline upon which any other procedure has to be measured. Procedures including total joint replacement, hemi-arthroplasty, excisional and inter-positional arthroplasties. All have been tried and all have been found wanting. The work of Pelligrini and Burton popularised the LRTI procedure, which is basically an excision of the trapezium with a sling arthroplasty.

Recent work, so far unpublished but soon to be published by Professor Davis from Nottingham, indicates that there is no difference in the end result between a simple excision and an LRTI. A simple excision is favoured by ourselves as being performed through an anterior approach, with repair and advancement of the abductor pollicis longus. It is also possible to perform an Anchovy if required.

One has to examine the place of arthroplasty. The Swanson arthroplasty is still used and is a good procedure for the patient with a Littler Eaton grade 3 (without scapho trapezoidal arthrosis). With that situation, in patients over 65, the results of implant arthroplasty are very good, with good long-term results and a very low incidence of silicone synovitis. However, in a younger patient or a patient with a grade 4, the problems of silicone synovitis are extremely high and unacceptable.

With regard to the de la Caffiniere and the le Doux these have been very disappointing, with loosening of one or both components, and/or dislocation. The revision, of course, is to an excisional arthroplasty. Arthodesis, although popularised by Carroll in New York and Chamay in Switzerland, still remains a procedure which is reserved for young men with secondary degenerative arthrosis, for whom excisional arthroplasty would be inappropriate.

Finally, osteotomy of the base of the metacarpal, as popularised by Bossley from New Zealand, certainly has extremely good effect for those patients with grade 2/3 Littler Eaton arthrosis, without subluxation.

MYCOSIS FUNGOIDES (CUTANEOUS T-CELL LYMPHOMA) CONFINED TO THE HAND – A CASE REPORT

Dr M Wells

A 68-year old woman presented with a 40-year history of skin rash/skin disease of the left hand. This had been slowly worsening and causing her to stop her occupation as operating theatre nurse.

The confusing clinical presentation, diagnostic difficulties and treatment of this rare case will be presented. The importance of tissue biopsy and tissue culture in the diagnosis of chronic disease is emphasized.

WRIST INSTABILITY

Dr T Herbert

ABSTRACT NOT AVAILABLE

SCAPHOID FRACTURES – AN UPDATE

Prof J Jupiter

ABSTRACT NOT AVAILABLE

SOFT TISSUE RECONSTRUCTION IN LIGAMENTOUS INJURIES OF THE WRIST

Prof JK Stanley

Like for like and substitution surgery has been performed for ligamentous injury in all joints of the body. In the wrist, because of the nature of the proximal row of the carpus, where there is no muscle attachments, the alternatives for stabilisation procedures of the wrist have been inter carpal fusions or ligament reconstructions. Ligament reconstructions were first popularised by the Mayo clinic and Linscheid and Dobyns who treated scapho-lunate interosseous ligament rupture using a number of different techniques, but essentially they required passing of extensor carpi radius longus or brevis through the scaphoid and the lunate.

These were only moderately successful and ligamentous reconstructions became less popular. But the advent of the Blatt dorsal capsulodesis and the Berger modification of that, plus the development of the Brunelli procedure using a strip of FCR has improved the results of soft tissue reconstructions and made them much more reliable.

On the ulnar side of the wrist ligament reconstructions have been disappointing, although ECU tenodesis is still a reasonable option in the milder forms of ulnar mid carpal instability. Ligament reconstructions remain a better option than inter carpal fusions in that late results of inter carpal fusion are poor by comparison.

ADDRESS LIST OF SPEAKERS
ADRESLYS VAN SPREKERS

Ackermann, Dr C	PO Box 3009 Ermelo 2350	Tel (017) 8197027 Fax (017) 8197023
Barrow, Dr AD	PO Box 902 Wendywood 2144	Tel (011) 8061772 Fax (011) 8061796
Butcher, Dr CC	Dept. of Orthopaedic Surgery Groote Schuur Hospital Observatory 7925	Tel (021) 4045107
Dawe, Mrs ALG	G15 Constantiaberg Medi-Clinic Burnham Road Plumstead 7800	Tel (021) 7977376 Fax (021) 7616393
De Beer, Mr BJL	Glenrand MIB PO Box 2544 Randburg 2125	Tel (011) 3291919 Fax (011) 3291921
De Jager, Dr LT	Cape Hand Clinic Vincent Pallotti Hospital Pinelands 7405	Tel (021) 5313621 Fax (021) 5313621
Exter, Ms JL	PO Box 70182 The Willows 0041	Tel (012) 8070998 Fax (012) 8070998
Herbert, Dr T	Consultant Hand Surgeon Le Bas Gauds Meridional Mons 83440 France	
Jupiter, Prof JB	15 Parkman Str., WAC-527 Massachusetts General Hospital Boston, Massachusetts 02114	
Kruger, Dr N	Dept. of Orthopaedic Surgery Groote Schuur Hospital Observatory 7925	Tel (021) 4045107
Maritz, Prof NGJ	Pretoria Academic Hospital Private Bag X169 Pretoria 0001	Tel (012) 3546528 Fax (012) 3546164
Mennen, Prof U	374 Lawley Street Waterkloof 0181	Tel (012) 5214219 Fax (012) 5214219

Muller, Dr JM	PO Box 572 Northriding 2162	Cell 082-608-0013 Fax (011) 4884163
Pienaar, Dr CH	Dept. of Orthopaedic Surgery Groote Schuur Hospital Observatory 7925	Tel (021) 4045107
Solomons, Dr MW	3 Brookwood Road Rondebosch 7700	Tel (021) 4045108 Fax (021) 6891200
Stanley, Prof JK	20 Derby Street West Ormskirk, Lancs, L39 3NH United Kingdom	Tel 0944-1695-575210 Fax 0944-1695-575210
Wells, Dr MC	PO Box 2704 Bellville 7535	Tel (021) 9304970 Fax (021) 9396914
Weskamp, Miss KF	Cape Hand Clinic Vincent Pallotti Hospital Pinelands 7405	Tel (021) 5310443 Fax (021) 5323611

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