THE SOUTH AFRICAN SOCIETY FOR SURGERY OF THE HAND

43RD CONGRESS

ELANGENI HOTEL

DURBAN





31 AUGUST – 2 SEPTEMBER 2012

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WELCOME MESSAGE FROM THE PRESIDENT

DR JOHAN VAN DER WESTHUIZEN

A warm welcome to all the delegates to our Annual Congress 2012 in Durban.

Our invited guest is Prof Zsolt Szabo. He is from the Department of Traumatology, BAZ County Teaching Hospital, Miskolc, Hungary and is currently the IFFSH and FESSH Secretary General. Prof Szabo is our first invited guest from Hungary and we all are looking forward to listen to his vast knowledge and experiences from other parts of the world.

I would like to thank Martin Wells for his hard work organizing this congress, as well as Hendrika for her continuous input and support to our society.

Please participate in the discussion and remember to support the trade during tea and lunch breaks.

Enjoy the congress

WELCOME MESSAGE FROM THE CONGRESS CHAIRMAN

DR MARTIN WELLS

Dear Friends in Hand Surgery

Welcome to the balmy beaches of Durban for our 43rd Annual Congress and Instructional Course.

We are extremely fortunate to have Zsolt Szabo from Hungary instructing us on the latest trends in hand surgery.

Thank you to our presenters of free papers and research, for your enthusiasm and stimulation of what promises to be lively scientific sessions.

A great thank you to the trade for your presence and support of our congress and our patients and surgeons.

Thank you to Hendrika van der Merwe for her hard and detailed work to make this 43rd congress a success.

We owe gratitude to the Executive Committee who worked selflessly behind the scenes to plan this meeting.

We appreciate the great venue, Elangeni Hotel on the Golden Mile of Durban's popular beaches.

Let us enjoy and have a great meeting!

INTERNATIONAL VISITOR

PROF ZSOLT SZABO

Prof Zsolt Szabo is Professor of Hand Surgery at the BAZ County Teaching Hospital, Department of Traumatology, Miskolc. Hungary.

He has published and lectured widely.

Professor Szabo is Secretary-General of the Federation of European Societies for Surgery of the Hand (FESSH) and also heads the Examination Board for Hand Surgery in FESSH.

He is Secretary-General of the International Federation of Societies for Surgery of the Hand.

GENERAL ANNOUNCEMENTS/ CONGRESS INFORMATION

CPD REGISTER

- Discovery Health will handle the CPD formalities on a daily basis
- Scanning will be done twice daily
- Approximately 7-10 days post-congress, you will receive notification to download your certificate from the website www.mycpd.co.za. You need to have your log-in and password details available to download your certificate

DRESS CODE

- Casual attire for congress sessions and smart casual for the social function

IMPORTANT

- Name badge: It is important to wear your name badge during the congress. Only delegates wearing name badges will be permitted to enter the lecture hall, exhibition area and the social function
- Please note that the use of mobile phones in the lecture hall is not permitted

INFORMATION FOR SPEAKERS

Keeping to your allocated time is a courtesy to all following speakers. The chairs of the sessions have been instructed to exert tight control and interrupt lengthy presentations. Please make sure you are aware of the time allotted to you for your presentation

Please hand your presentation to the audiovisual technicians at least 3 hours prior to the session in which the presentation is being given. The technicians will be available in the congress venue to receive your material

INFORMATION/REGISTRATION DESK

The Information/Registration Desk will be situated in the Foyer. Please feel free to visit the Desk should you require any assistance

LANGUAGE

The official language of the congress will be English. No simultaneous translation service will be provided

SMOKING

In accordance with Government Legislation regarding smoking in public areas, kindly note that this venue is a non-smoking area

TRADE EXHIBITORS

Kindly make every effort to visit all the stands

Teas and lunches will be served in the trade exhibition area

2012 CONGRESS ORGANISING COMMITTEE

Congress Chairman	Martin Wells
Congress Coordinator	Hendrika van der Merwe

SOCIAL FUNCTION

Congress Dinner	Saturday 2 September 2012
1930 for 2000	Great Ilanga Conference Centre, Elangeni Hotel Dress: Smart Casual

FUTURE EVENTS

ANNUAL REFRESHER COURSE

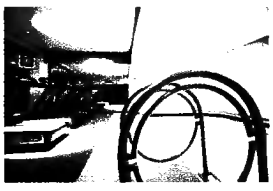
TOPIC	**ARTHRITIS AND CONNECTIVE TISSUE DISORDERS OF THE HAND AND WRIST**	
2013	22 February	Pre-meeting Cadaver Workshop
	Venue:	Tygerberg Hospital Advanced Orthopaedic Training Centre
	23-24 February	SASSH Refresher Course
	Venue:	Southern Sun Cape Sun, Strand Street, Cape Town

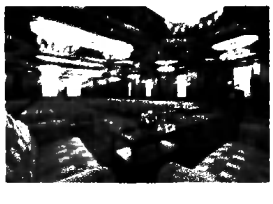
ANNUAL CONGRESS

2013	44th Congress and Instructional Course	
	Date	30 August – 1 September
	Venue	t b a

PLEASE DIARISE THESE DATES

SASSH REFRESHER COURSE 2013





It's been 6 years' waiting for this upcoming

Refresher Course on

ARTHRITIS AND CONNECTIVE TISSUE DISORDERS OF THE HAND AND WRIST

Join us in Cape Town at the Southern Sun Cape Sun from 23-24 February 2013 for a thorough, exciting update on all about
Osteoarthritis, Rheumatoid Arthritis, Non-operative and Operative Solutions for Arthritis.

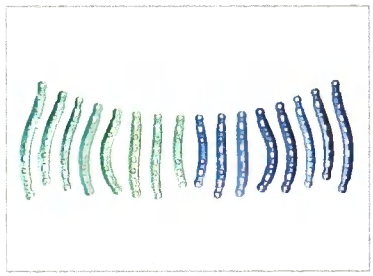
Come and experience the latest international developments in Joint Surgery at our Pre-meeting Cadaver Workshop planned on Friday afternoon 22 February 2013 at the state-of-the-art Advanced Training Centre of the University of Stellenbosch in Tygerberg Hospital

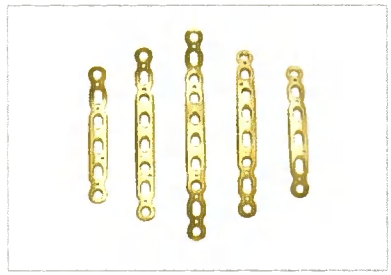
The Workshop and Refresher Course will be led by experienced International Faculty as well as local Surgeons sharing their very best with us

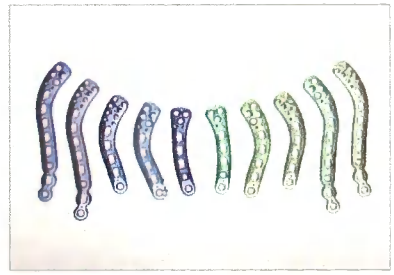
For further details contact:
Hendrika van der Merwe – Congress Coordinator
Telephone: 021 9103322 Emal: sassh@iafrica.com

Dual-Trak Clavicle Screw

Locking Clavicle Plating System







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OFFICE BEARERS

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Members	Michael Carides Erich Mennen Roger Nicholson
Executive Secretary/Congress Coordinator	Hendrika van der Merwe
Office	2721, Bellville SA 7535 021 9103322 0866 720 426 sassh@iafrica.com www.sassh.co.za

PAST PRESIDENTS

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
1999-2001	LT de Jager
2001-2003	JJ van Wingerden
2003-2005	M Carides
2005-2007	TLB le Roux
2007-2009	MC Wells
2009-2011	M Solomons

AC BOONZAIER MEMORIAL LECTURES

1997	PROF ULRICH MENNEN "In Appreciation of the Hand"
1998	DR JOHN YOUNGLESON "Reminiscing the Past"
1999	DR EDWARD BOWEN-JONES "Bamba Isandla Qualities of a Leader in Hand Surgery"
2000	PROF KS NAIDOO "Overview of Hand Surgery"
2001	DR LT (WIKUS) DE JAGER "The Future of Hand Surgery in South Africa"
2002	PROF SYD BIDDULPH "The Hand – A Mirror of Disease"
2003	DR JAN VAN WINGERDEN "The Joy of Medical Discovery"
2004	DR INGRAM ANDERSON "The Hand – Cogitations of a Rheumatologist"
2005	DR MICHAEL CARIDES "But, on the other hand....."
2006	PROF MICHAEL TONKIN "On Surgeons, Heads, Hearts and Hands – A Philosophy"
2007	PROF THEO LE ROUX "Hand-outs from the Mind"
2008	PROF ALAN MORRIS "So when DID we stop climbing in trees? Current debates on the evolution of the hand"
2009	DR MARTIN WELLS "Standing on the Shoulders of Giants"
2010	DR MICHAEL HAUSMAN "The Analog Digit"
2011	DR MICHAEL SOLOMONS "Where do we come from?"

ANNUAL GENERAL MEETING

Saturday 1 September 2012 – 17:00 – 18:00
East Ilanga Boardroom, Conference Centre, Elangeni Hotel
(Members only / Slegs Lede)

1
Welcome Address by the President
Verwelkoming deur die President

2
Apologies and Proxies
Verskonings en 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 President Elect
Aankondiging van Aangewese President

9
Membership
Lidmaatskap

10
General
Algemeen

11
Next Annual General Meeting
Volgende Algemene Jaarvergadering

SCIENTIFIC PROGRAM

43rd ANNUAL CONGRESS AND INSTRUCTIONAL COURSE
31 AUGUST – 2 SEPTEMBER 2012
CONFERENCE CENTRE, ELANGENI HOTEL, DURBAN

FRIDAY 31 AUGUST 2012

1300-1700	Trade Exhibitor Set-up in Conference Centre as per Floor Plan	

SATURDAY 1 SEPTEMBER 2012

0715-0750	Delegate Registration: Foyer, Conference Centre, Elangeni Hotel	
0750-0800	Welcome and Announcements	*Martin Wells*
SESSION 1	**CHAIR: MARTIN WELLS**	
0800-0810	Comparing Volar Plates to Volar Locking Plates with Arthroscopic Assisted Reduction using the Teardrop Angle Measurement as Indicator of Successful Reduction	*Gerhard Pienaar, Ajmal Ikram*
0810-0815	Discussion	
0815-0825	Fragment Specific Fixation of Intra-Articular Distal Radius: The Role of Arthroscopy to Confirm Anatomical Reduction:	*Mari Thiart, Ajmal Ikram*
0825-0830	Discussion	
0830-0840	Fractures of the Middle Third of the Clavicle – Epidemiological Study Of Patients Treated at a Tertiary Hospital and a Classification System	*Reggie King*
0840-0845	Discussion	
0845-0855	DIP Joint Arthrodesis using the Autofix Screw (Small Bone Innovations, France)	*Richard Zinn, Michael Carides*
0855-0900	Discussion	
0900-0910	Using a Mini Tight Rope in the Treatment of Chronic Thumb CMC Dislocations	*Mark v d Kaag, Ajmal Ikram*
0910-0915	Discussion	
0915-0925	Intramedullary Locked Fixation of Clavicle Shaft Fractures – Continued Review of Results	*Reggie King*
0925-0930	Discussion	
0930-0955	Distal Radius Fractures: The Importance of the Three Columnar Concept	*Zsolt Szabo*
0955-1000	Discussion	
1000-1040	**TEA**	
SESSION 2	**CHAIR: MICHAEL SOLOMONS**	
1040-1050	Accuracy of Examination of the Lacerated Forearm at Chris Hani Baragwanath Academic Hospital	*Matthew Street*
1050-1055	Discussion	
1055-1105	Acute Zone 3 Flexor Tendon Injury Management at Kenyatta National Hospital, a Kenyan Tertiary Hospital in Nairobi	*Omondi Afulo*
1105-1110	Discussion	
1110-1120	Post-Operative Management of Zone I – IV Flexor Tendon Repairs: Rationale for Change	*Robyn Midgley*
1120-1125	Discussion	

1125-1135	Aberrant Musculature in the Hand and Forearm	*Andrew Barrow*
1135-1140	Discussion	
1140-1150	Should all Potential Gun Owners be Screened for a Linburg-Comstock Anomaly?	*Cameron Anley, Ajmal Ikram*
1150-1155	Discussion	
1155-1225	Surgical Suture Materials in Hand Surgery / How to Choose	*Zsolt Szabo*
1225-1230	Discussion	
1230-1330	**LUNCH**	

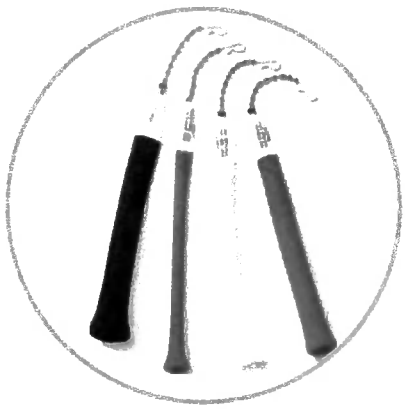
SESSION 3	**CHAIR : ULRICH MENNEN**	
1330-1340	Radial Nerve Lacerations: The Outcome of Primary End-to-End Repairs	*Maritz Laubscher, M Held, M Maree, M Solomons*
1340-1345	Discussion	
1345-1355	Outcomes of Sural Nerve Grafting vs Triple Nerve Transfers in the Management of Penetrating Upper Brachial Plexus Injuries	*Alex vd Horst, M Maree, M Solomons*
1355-1400	Discussion	
1400-1410	Complex Regional Pain Syndrome: Fact or Myth?	*Dershnee Devan*
1410-1415	Discussion	
1415-1425	Anatomy of the Clavicle and its Medullary Canal	*Reggie King.*
1425-1430	Discussion	
1430-1455	Bone Defects of the Hand: What to do?	*Zsolt Szabo*
1455-1500	Discussion	
1500-1530	**TEA**	

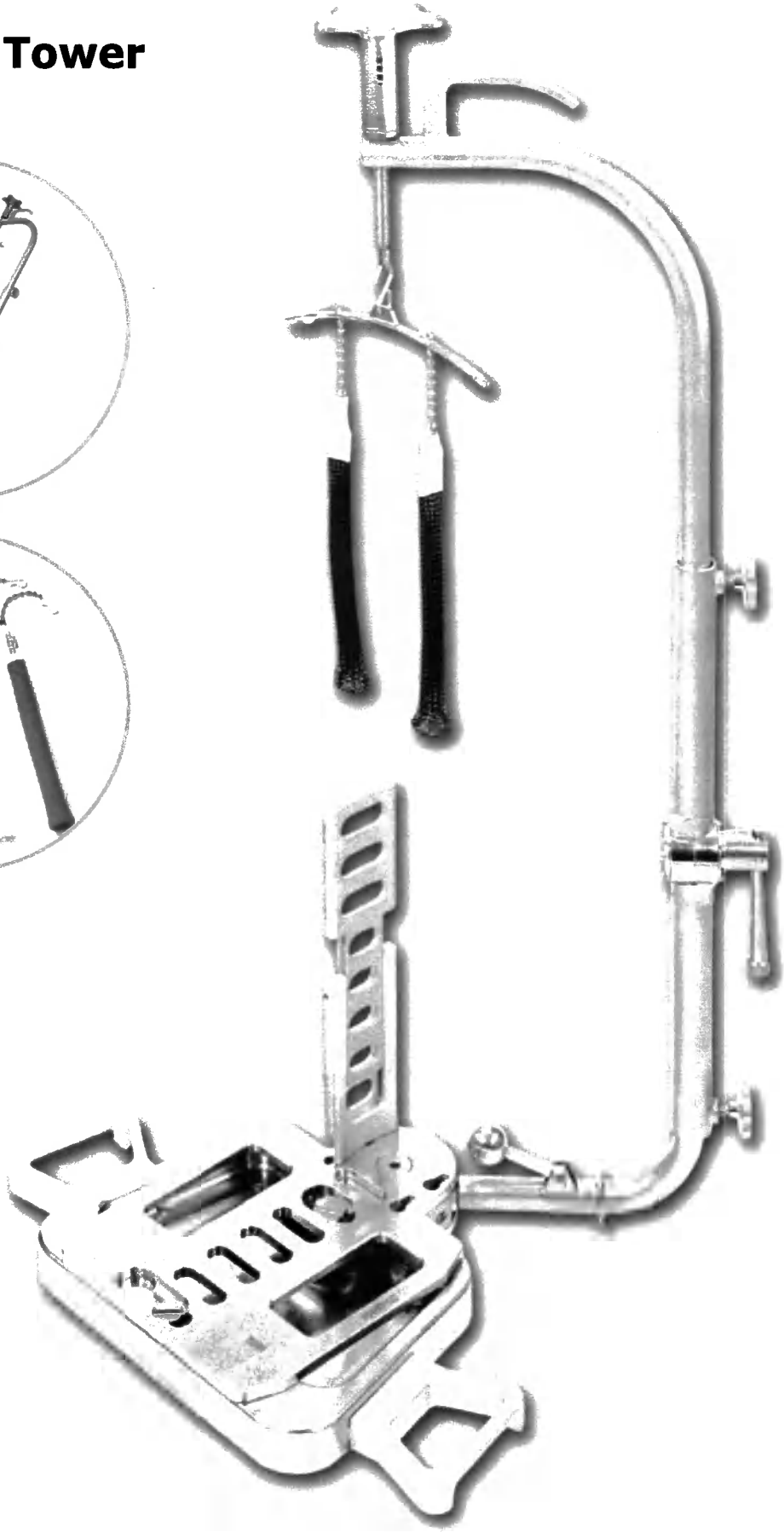
SESSION 4	**CHAIR : ERICH MENNEN**	
1530-1540	Chronic Unreduced Dislocations of the Elbow	*Hans Myburgh*
1540-1545	Discussion	
1545-1555	Casting Motion to Mobilise Stiffness – The Secret to Unlocking Digital Stiffness	*Robyn Midgley*
1555-1600	Discussion	
1600-1610	Outcomes following Steroid Injections in Various Hand Conditions	*Michael Solomons, S Carter, M Maree*
1610-1615	Discussion	
1615-1640	Dupuytren's Contracture: Is it Time for a New Approach? / The Collagenase Experience	*Zsolt Szabo*
1640-1645	Discussion	
1700-1800	Annual General Meeting (members only) Venue: East Ilange Boardroom	
1930 for 2000	**Congress Dinner** **Venue: Great Ilanga Hall, Elangeni Hotel** **Dress: Smart casual**	

SUNDAY 2 SEPTEMBER 2012

0730-0750	Delegate Registration: Foyer, Conference Centre, Elangeni Hotel:	
SESSION 5	**CHAIR : ANDREW BARROW**	
0800-0835	Pedicled vs Free Flaps in Upper Limb Reconstruction	*Zsolt Szabo*
0835-0840	Discussion	
0840-0850	Symbrachydactyly – A Retrospective Review of 17 Free Toe Phalangeal Grafts	*Steve Carter*
0850-0855	Discussion	
0855-0905	"The Elusive Tumour"	*Ulrich Mennen*
0905-0910	Discussion	
0910-0920	That's Weird Man!	*Michael Solomons*
0920-0925	Discussion	
0925-1000	The Five Most Important Pedicled Flaps of the UpperLimb	*Zsolt Szabo*
1000-1005	Discussion	
1005-1040	**TEA**	
SESSION 6	**CHAIR : MICHAEL CARIDES**	
1040-1050	Developing an Algorithm for Ulnar Sided Wrist Pain	*Michael Solomons*
1050-1055	Discussion	
1055-1105	Acute Perilunate Dislocations: Is Reconstructing the Scapho-Lunate Ligament Really Necessary?	*Michelle Maree, M Solomons*
1105-1110	Discussion	
1110-1120	Locked Plates: The Potential for Disaster	*Andrew Barrow*
1120-1125	Discussion	
1125-1135	The Surgical Management of the Dorsal Wrist Syndrome (DWS)	*Michael Solomons*
1135-1140	Discussion	
1140-1220	AC Boonzaier Lecture: "The Human Hand – The Most Beautiful Tool"	*Zsolt Szabo*
1220-1320	**LUNCH**	
SESSION 7	**CHAIR: JOHAN van der WESTHUIZEN**	
1320-1420	Ethics Lecture:	*Advocate Devina Perumal*
1420-1445	Long term Results (25 years) in Prosthetic Replacement of the Carpal Bones	*Zsolt Szabo*
1445-1450	Discussion	
1450-1515	Treatment of Scaphoid Fractures. Is it a Problem?	*Zsolt Szabo*
1515-1520	Discussion	
1520	Announcement of the Stratmed Prize for Best Research and the Macromed Barry O'Kelly Memorial Prize	
1525	**Closure of Congress**	*Johan vd Westhuizen*

Arc Wrist Tower





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ABSTRACTS

(Listed according to Scientific Program)

TITLE: *COMPARING VOLAR PLATES TO VOLAR LOCKING PLATES WITH ARTHROSCOPIC ASSISTED REDUCTION USING THE TEARDROP ANGLE MEASUREMENT AS INDICATOR OF SUCCESSFUL REDUCTION.*

Author(s): **Gerhard Pienaar** *Orthopaedic Registrar, Tygerberg Academic Hospital*
Ajmal Ikram *Specialist Hand Consultant Tygerberg Academic Hospital*

Distal radius fractures are among the most common fractures of the upper extremity. Often generating multiple fragments with distortion of the normal anatomy in all three dimensions. Intra articular fractures involving the volar lunate facet are among the more difficult articular fractures to treat effectively. The volar rim of the lunate facet is an important bony structure in maintaining stability of the radiolunate articulation and failure to reduce and stabilize the lunate facet intra operatively, has been shown to result in poor functional and radiographic outcomes. In plain radiographs, Medoff introduced the teardrop angle (TDA), which is a radiographic parameter and is measured as the angle formed between the central axis of the teardrop and the radial shaft. It's important because the TDA can herald the presence of articular incongruity of the lunate facet. Fujitani et el showed in their study that there is a high intra-observer and interobserver reliability in measurement of the TDA and may also be useful in post reduction radiographs as well as in intraoperative fluoroscopy images to assess the quality of fracture reduction.

We report on a retrospective audit of 37 patients comparing volar locking plates with arthroscopic assisted reduction of the intra-articular fractures to a normal volar locking plate where reduction was confirmed only with image intra-operatively using the Teardrop Angle Measurement as indicator of successful reduction. All patients were treated for distal radius fractures at Tygerberg Academic Hospital and were reviewed radiographically to measure reduction success.

TITLE: *FRAGMENT SPECIFIC FIXATION OF INTRA-ARTICULAR DISTAL RADIUS: THE ROLE OF ARTHROSCOPY TO CONFIRM ANATOMICAL REDUCTION: A LITERATURE REVIEW AND THE RESULTS OF OUR TYGERBERG EXPERIENCE.*

Author(s): **Mari Thiart; Ajmal Ikram** *Tygerberg Hospital, Cape Town, South Africa*

Purpose: Fragment specific fixation has been successfully used in first world countries to maintain intra-articular distal radius fractures. The use of arthroscopy to assist in intra-articular distal radius fracture fixation has been controversial. The goal of this study was two-fold: to discover whether fragment specific fixation maintains the fracture reduction in our population and to establish whether intra-operative arthroscopy assists in the reduction.

Methods: All patients with intra-articular distal radius fractures were included in our study. A CT scan was done to ascertain how many fragments were involved and where the fragments were anatomically. Intra-operatively, the fragments were reduced and fragment specific fixation used. The reduction was confirmed with an image intensifier. After the reduction, a scope was inserted into the radiocarpal joint to evaluate the reduction. Other pathology like TFCC tears was also documented.

Results: 30 patients were included in the study at the time of the congress. The trial is ongoing. The arthroscopic results determined that 20% of patients had a small gap (<2mm) intra-articularly and 20% of patients had a step (<3mm) intra-articularly. As these are regarded as acceptable reduction figures, the fractures were not fixated.

None of the patients needed the fracture to be reduced again but one patient had a pin repositioned because it was intra-articular. 36% of patients had other intra-articular pathology; but only one patient needed further treatment- anchors inserted to close the capsule and reduce the radiocarpal joint.

The average ages of the patients were 40 years (20-60 years). The average tourniquet time was 78 minutes (30-120 minutes).

Conclusion: The use of arthroscopy intra-operatively was shown to not assist in the fracture reduction when fixing with fragment specific fixation. It did allow for a detailed inspection of the joint for other pathologies and showed that more than a third of patients have additional pathology. The addition of arthroscopy did not alter our initial management. Long term we will be following the patients up to see how their range of movement improves. At 6 months follow up we will do CT scans of the wrist to establish whether the fracture has healed and whether there is any collapse of the fracture.

TITLE: *FRACTURES OF THE MIDDLE THIRD OF THE CLAVICLE – EPIDEMIOLOGICAL STUDY OF PATIENTS TREATED AT A TERTIARY HOSPITAL AND A CLASSIFICATION SYSTEM*

Author(s): **Reggie King** *Registrar, Tygerberg Hospital*

Background: An epidemiological study of patients with middle third clavicle fractures presenting to a tertiary hospital. The data is used to formulate a classification system for middle third clavicle fractures based on fracture configuration and displacement.

Description of methods: Patients presenting primarily to a referral hospital with middle third clavicle fractures were identified using the PACS radiology system. The radiographs were reviewed to determine the fracture type, displacement, shortening and amount of comminution. The clinical notes of each patient were reviewed to determine the mechanism of injury, soft tissue status, neurovascular status and treatment rendered. A novel classification system was developed to describe the different fracture configurations seen in the group. The interobserver and intraobserver correlation of the classification system as well as the ability of the classification system to predict treatment were tested.

Summary of results: Three hundred and three patients were included in the review, 223 males and 80 females. Middle third clavicle fractures were displaced in 69% of cases. Displaced fractures tend to have a significant amount of displacement and shortening in most cases with averages of 19.64mm (Std Dev. 6.901) and 19.15mm (Std Dev. 9.616) respectively. Acceptable interobserver and intraobserver correlation levels were shown for the proposed classification system.

Conclusion: The epidemiology of middle third clavicle fractures found in the population studied differs substantially from first world populations. It underlines the high level of road traffic accidents and interpersonal violence seen in South Africa. Surgeons treating clavicle fractures are still divided on the indications for surgery with little correlation found between the fracture type and displacement on radiographs and the type of treatment rendered. The classification system provides guidelines to guide treating surgeons to the correct treatment modality.

TITLE: *DIPJ ARTHRODESIS USING THE AUTOFIX SCREW (SMALL BONE INNOVATIONS, FRANCE).*

Author(s): **Richard Zinn** *Registrar, Division of Plastic and Reconstructive surgery, Department of General Surgery. University of Witwatersrand Medical School, Johannesburg*

Michael Carides *Hand Consultant, JHB*

Aims: To determine patient satisfaction and complication rates of DIPJ fusion using the Autofix screw (Small Bone Innovations, France).

Methods: A questionnaire was devised to assess patients' satisfaction and complications related to the procedure. Radiological records were reviewed to determine rate of bony union at 7 weeks post-operation.

Results: 39 fingers were fused in 29 participants. Mean follow up was 36 months (range 2 – 48 months). Patient satisfaction was above 90%. We had a major complication rate of 2.56%, minor complication rates of 20.5%. There was a higher rate of complications in patients younger than 60 years of age.

Conclusion: Our technique for the insertion of the Autofix, headless compression screw is demonstrated.

It is a simple, quick and effective technique for the fusion of distal interphalangeal joints of all fingers; there is no 'down-time', and complication rates are superior to the largest series published in international literature. Furthermore, we demonstrate 100% union by 7 weeks.

We attribute these results to 3 aspects of the procedure.

1) The Autofix screw is a smaller diameter screw than previously used for this procedure.

2) The screw generates significant compression across the fusion site.

3) We utilise bone graft routinely

TITLE: *USING A MINI TIGHT-ROPE IN THE TREATMENT OF CHRONIC THUMB CMC DISLOCATIONS*

Author(s): **Mark van der Kaag** *Registrar, Tygerberg Hospital*
Ajmal Ikram

Aims of study: The thumb carpo-metacarpal (CMC) joint is a unique articulation that allows stability during pinch grip and a large degree of mobility. The joint is inherently unstable and the congruity depends on the restraining ligaments and peri-articular muscles. Although CMC joint dislocation is rare, instability leads to pain, weakness and joint degeneration. Axial loading with flexion of the thumb meta carpal base forces the joint to dislocate dorsally. It was commonly accepted that the volar ligaments were key in stability of the joint. Recent studies prove an increased number of nerve endings in dorsal ligaments, inferring that stability relies on the dorsal ligaments. Optimal treatment strategies for CMC joint dislocations are a subject of debate and range from closed reduction and casting to closed or open reduction with temporary fixation with or without ligament reconstruction. We aim to prove that using a tight rope and dorsal capsule repair of the CMC joint leads to greater stability and good range of motion with decreased incidence of joint degeneration.

Method: Patients with chronic CMC dislocations (4-6 weeks post injury) were enrolled for this study. The surgical technique included the open reduction and fixation of the thumb metacarpal via a mini-tightrope and a repair of the dorsal capsule. Patients were immobilised for three weeks after which range of motion exercises were encouraged.

Results: Four patients were included in this study. The patients are being followed up and six month results will be presented at the congress.

Conclusion: Due to the improved strength of the suspension, the use of the mini tight-rope to stabilize the thumb metacarpal following dislocation allows for early mobilisation and greater stability of the joint. Initial results are promising.

TITLE: *INTRAMEDULLARY LOCKED FIXATION OF CLAVICLE SHAFT FRACTURES – CONTINUED REVIEW OF RESULTS*

Author(s): **Reggie King** *Registrar, Tygerberg Hospital*

Background: Continued assessment of the effectiveness of a locked intramedullary device in the treatment of acute clavicle shaft fractures. Results of patients treated thus far including patients reported on previously.

Description of methods: Patients admitted with midshaft clavicle fractures were assessed to determine whether operative fixation of the fracture was required. Indications for surgery were midshaft clavicle fractures with 100% displacement; more than 1,5cm of shortening, containing a displaced butterfly segment, bilateral clavicle fractures, ipsilateral displaced glenoid neck fractures, skin and neurovascular compromise. Patients that matched the criteria for surgery were treated operatively with an intramedullary locked device by the author. Post-operatively, patients were kept in a shoulder immobilizer

for a perioc of 6 weeks. Patients were invited to attend a scheduled follow-up visit where the data was collected that comprised the review. All patients were assessed by the surgeon, a radiologist, a physiotherapist and an occupational therapist. Scar size and quality, Dash score, Constant Shoulder score, complications and the radiological picture were assessed.

Summary of results: 50 patients (52 clavicle fractures – 2 patients sustained bilateral fractures), 28 males and 22 females with a mean age of 30 attended the schedule data collection visit and were included in the study. 48 clavicles achieved complete union with the remaining 4 fractures progressing normally to union at 10 and 12 weeks post surgery. No additional complications than those reported on previously were encountered.

Conclusion: Locked intramedullary fixation of clavicle shaft fractures that match the criteria for operative fixation continues to give good results. No non-unions were found and a high level of patient satisfaction was achieved. The operative technique continues to be refined leading to less fixation related complications.

TITLE: *DISTAL RADIUS FRACTURES: THE IMPORTANCE OF THE THREE COLUMNAR CONCEPT*

Author(s): **Zsolt Szabo** *Professor of Hand Surgery, BAZ County Teaching Hospital, Department of Traumatology Miskolc, Hungary*

TITLE: *ACCURACY OF EXAMINATION OF THE LACERATED FOREARM AT CHRIS HANI BARAGWANATH ACADEMIC HOSPITAL*

Author(s): **Matthew Street** *(Wits, Baragwanath Hand Unit)*
J Pietrzak, LG Biddulph, S Dryden

Purpose of study: Penetrating injuries of the hand and forearm cause significant morbidity for patients. Our aim is to evaluate the accuracy of initial examination of forearm lacerations and pre-operative examination and compare both to the actual findings on surgical exploration. And to identify any factors influencing the accuracy of the initial examination. Existing literature indicates that there are initial and subsequent examination differences in terms of picking up injuries. We compare our results to these.

Description of methods: 65 consecutive patients with penetrating injuries to the forearm have been studied. Forms documenting initial, preop examination findings and surgical findings were noted for each patient.

Summary of results: Our results have shown that as many as 40% of injuries are missed on examination initially by casualty officers but only 10% are missed on re-examination post admission. Factors such as alcohol intoxication and distracting injuries play a role in the casualty examination being difficult.

Conclusion: Underlying injury to structures in the forearm and hand are often missed on initial examination of lacerations involving the forearm and hand. Re-examination post admission of the patient is essential to avoid underestimating the extent of the underlying damage to structures of the forearm and hand.

TITLE: *ACUTE ZONE 3 FLEXOR TENDON INJURY MANAGEMENT AT KENYATTA NATIONAL HOSPITAL; A KENYAN TERTIARY HOSPITAL IN NAIROBI*

Author: **Omondi Afulo**

Introduction: The hand is the most exposed part of the body. It is only second to the skin. It is used in most activities of daily living and therefore the most likely to be injured in any encounter.

The types of injuries range from blunt, penetrating, explosions, bites among others. The outcome of hand function depends on how fast the injured hand is given the right attention.

Objective: To assess the urgency at which an injured hand is attended and the methods applied to address the various injuries. The first contact with the injured hand plays a major role in the outcome of the hand function.

Design and source: This is a 3 month prospective study involving all patients admitted to the orthopedic wards of Kenyatta National Hospital with zone 3 flexor tendon injuries. There were 100 patients enlisted for the study.

Patient method: All patients with hand injuries admitted in the orthopedic wards between December 2011 and February 2012 were enlisted. They had surgery and then followed up at the hand clinic, occupational and physiotherapy units.

Results: The results were as follows: Operated within 24 hours (10%), 24 – 72 hours (20%), 72 hours- 5 days (30%), over 5 days (40%). The infection rate was as follows: operated within 72 hours (10%) , 3 -5 days (20%) , over 5 days (20%). Tencon rupture due to non-compliance to dynamic splint was 20%. Post-operative stiffness was 30%. Re-do surgery for tenodesis (tenolysis) was 30%. Full function after 3 months was 30%. The rest required various services including further rehabilitation, re-do surgery for tenolysis and secondary tendon repair among others,

Conclusion: Acute zone 3 tendon injury is an emergency which requires urgent attention. The first contact with the patient is expected to do initial thorough surgical toileting with minimum excision of soft tissues. Tendon repair does not need to be done immediately but wound debridement and irrigation with warm saline help minimize infection rate by over 70%. The role of antibiotics , analgesics and splinting cannot be overemphasized at this initial stage. Use of the right tools, skills and surgical techniques ensures a functional hand and timely return to work.

TITLE: *POST OPERATIVE MANAGEMENT OF ZONE I-IV FLEXOR TENDON REPAIRS – RATIONALE FOR CHANGE.*

Author(s): **Robyn Midgley** *Medical Suite B7A, Hobart Grove, Bryanston, Johannesburg*

Aim of the Study: Early active and passive mobilization regimes are used almost exclusively following flexor tendon repairs, resulting in good to excellent clinical outcomes. Tendon rupture, adhesions, gap formation and proximal interphalangeal fixed flexion deformities are common post operative complications. Synergistic wrist motion combined with early active movement, Metacarpophalangeal joint positioning within the splint and the timing of treatment are the new variables for change in the management of flexor tendon injuries.

Method: 10 patients (15 fingers) with Zone I –IV flexor tendon injuries with or without digital nerve injuries were repaired using a 2-strand modified Kessler technique. A modified synergistic early active movement regime was applied 3 days after surgery. The rationale for the timing of treatment, splint design and the exercise regime are described.

Results: 9/10 patients regained full active range of motion of the injured finger(s) without developing complications. 1 patient required a FDP Tenolysis to improve tendon glide.

Conclusion: This case series demonstrates the effective application of the modified synergistic early active regime for Zone I-IV flexor tendon repairs using a 2 strand modified Kessler technique. Digital flexion is regained by facilitating a balance between tendon force and excursion to prevent adhesions and gap formation, resulting in enhanced clinical outcomes.

TITLE: *ABERRANT MUSCULATURE IN THE HAND AND FOREARM*

Author(s): **Andrew Barrow** *Wits*

Aim: The aim of this paper is to highlight various aberrant muscles encountered in the hand and forearm. Various forms of aberrant musculature are encountered in the hand and forearm. A case of a reverse Palmaris longus muscle, 4 cases of extensor digitorum brevis manus and several cases of anconeus epitrochlearis are discussed. Aberrant musculature in the palm is also looked at. These unusual variants are sometimes encountered in clinical practice and or during surgery. An appreciation of their existence and potential problems associated with them is useful in clinical practice.

TITLE: *SHOULD ALL POTENTIAL GUN OWNERS BE SCREENED FOR A LINBURG-COMSTOCK ANOMALY?*

Author(s): **Cameron Anley** *Tygerberg Hospital*
Ajmal Ikram

Aims of study: The Linburg-Comstock Anomaly was first described in 1979 and constitutes a connection between the flexor pollicis longus and the index flexor digitorum profundus in the forearm. As a result of this anomaly, individuals lack independent flexion of the thumb IPJ and index finger DIPJ. Although commonly asymptomatic, it can be a cause of wrist and distal forearm pain and can be problematic for musicians and individuals using pistols (due to accidental discharge.) The incidence of this condition ranges from 20 – 37 % depending on the population studied. There is no published data on the incidence in South Africans.

Methods: Data collection is on-going. Staff, medical students, visitors and patients at Tygerberg Hospital are being screened for the Linburg-Comstock anomaly with a simple screening test. This includes flexing the thumb IPJ and observing for concurrent flexion of the index finger DIPJ. In addition, demographic data and key pinch strength is being collected.

Results: Results to be presented at the congress.

Conclusion: Although normally asymptomatic, the Linburg-Comstock Anomaly remains a potential cause of forearm pain. The incidence from our South African cohort will be presented at the congress along with diagnostic test, work-up and treatment options.

TITLE: *RADIAL NERVE LACERATIONS: THE OUTCOME OF PRIMARY END-TO-END REPAIRS*

Author(s) **Maritz Laubscher** *Registrar, Department of Orthopaedic Surgery, Groote Schuur Hospital*
M Held; M Maree; M Solomons

Aims of study: Radial nerve laceration is a relatively common injury in South Africa due to the high prevalence of penetrating trauma. Primary end-to-end repair is the mainstay of our treatment. Our aim is to assess the outcome of this treatment in our unit.

Methods: We retrospectively reviewed 42 consecutive patients with radial nerve lacerations (excluding posterior interosseus nerve) that underwent primary end-to-end repair between 2008 and 2011. 15 cases had to be excluded due to patients defaulting follow up during the post-operative period. The patients' records were reviewed. The return of function was assessed.

Results: The mean patient age was 26 at time of surgery. Patients presented a mean of 2 day after their injury. All patients underwent a primary end-to-end repair at a mean of 4 days following their injury. The mean follow up was 11 months. 93% of patients recovered useful (M3+) wrist extension. Metacarpophalangeal extension with the wrist extended was achieved in 74% of cases and thumb retropulsion was possible in 52%.

Conclusion: Primary end-to-end repair is possible in the majority of radial nerve lacerations. A functional result can be expected.

TITLE: *OUTCOMES OF SURAL NERVE GRAFTING VS TRIPLE NERVE TRANSFERS IN THE MANAGEMENT OF PENETRATING UPPER BRACHIAL PLEXUS INJURIES.*

Author(s): **Alexander Van der Horst; MN Maree; M Solomons**

Aims of study: Following penetrating upper brachial plexus (c5/c6) injuries patients will present with a loss of shoulder function and elbow flexion. Reconstructive options include sural nerve grafting or nerve transfers. When proximal stumps are available, the surgeon is faced with a dilemma which of these options to use. This study has been designed to compare the outcome of these two modalities.

Methods: From an extensive data base of brachial plexus injuries treated at the martin singer hand unit at groote schuur hospital, suitable patient folders were retrospectively reviewed.

Results: Intermediate results suggest good to excellent elbow function scores in the triple nerve transfer group compared with the sural nerve graft group. Shoulder function scores were fair in both groups.

TITLE: *COMPLEX REGIONAL PAIN SYNDROME FACT OR MYTH ?*

Author(s): **Dershnee Devan**

Background: Complex Regional Pain Syndrome is a diagnosis that is often difficult to diagnose and to treat. This is due to the varying aetiology for this condition and the equally varied range of treatment techniques. Many of these patients do not recover fully, are often left disabled and unable to use their upper limbs in daily activity.

Aims of study: To explore the relevant clinical guidelines for assessment and treatment of complex regional pain syndrome.

Method: To review case studies of two patients referred to a private hand therapy practice. One patient subsequently developed complex regional pain syndrome and the other was referred with the diagnosis of complex regional pain syndrome. This study will review the diagnostic criteria and their relevance to these patients as well as their treatment and subsequent progress. A review of current literature will be included in the presentation.

Results: Each case presented and progressed differently. The resolution of symptoms was related to therapeutic factors, aetiology and an understanding of underlying pain mechanisms.

Conclusion: This study will highlight the complex nature of complex regional pain syndrome and how the understanding of the pain mechanisms and application to treatment can result in a better prognosis for these clients.

TITLE: *ANATOMY OF THE CLAVICLE AND ITS MEDULLARY CANAL*

Author(s): **Reggie King** *Registrar, Tygerberg Hospital*

Background: Intramedullary fixation of clavicle fractures requires an adequate medullary canal to accommodate the fixation device used. This computer tomography anatomical study of the clavicle and its medullary canal describes its general anatomy and provides the incidence of anatomical variations of the medullary canal that complicates intramedullary fixation of midshaft fractures.

Description of methods: Four hundred and eighteen clavicles in 209 patients were examined using computer tomography imaging. The length and curvatures of the clavicles were measured as well as the height and width of the clavicle and its canal at various pre-determined points. The start and end of the medullary canal from the sternal and acromial ends of the clavicle were determined. The data was grouped according to age, gender and lateralization.

Summary of results: The average length of the clavicle was 151.15mm with the average sternal and acromial curvature being 1460 and 1330 respectively. The medullary canal starts on average 6.59mm from the sternal end and ends 19.56mm from the acromial end with the average height and width of the canal at the middle third being 5.61mm and 6.63mm respectively.

Conclusion: The medullary canal of the clavicle is large enough to accommodate commonly used intramedullary devices in the majority of cases. The medullary canal extends far enough medially and laterally to ensure that an intramedullary device can be passed far enough medially and laterally past the fracture site to ensure stable fixation in most middle third clavicle fractures. An alternative surgical option should be available in theatre when treating females as the medullary canal is too small to pass an intramedullary device past the fracture site on rare occasions. Fractures located within 40mm of the lateral or medial ends of the clavicle should not be treated by intramedullary fixation as adequate stability is unlikely to be achieved.

TITLE: *BONE DEFECTS OF THE HAND: WHAT TO DO?*

Author(s): **Zsolt Szabo**

TITLE: *CHRONIC UNREDUCED DISLOCATIONS OF THE ELBOW*

Author(s): **Hans Myburgh** *University of Pretoria*

Introduction: Chronic unreduced elbow dislocations area rare condition that is mostly encountered in developing countries. After 3 weeks a closed reduction is impossible and the surgeon should plan his treatment options accordingly.

Clinical presentation: The patients present with deformity, stiffness and loss of function. The most common presentation is a postero-lateral dislocation with 30-40% associated fractures. Associated nerve injuries are uncommon.

Pathology: There is contracture of the anterior and posterior capsule with inter-articular fibrosis. The articular surfaces are covered with a fibrous membrane. Heterotopic ossification is common. There is contracture of the triceps and fibrosis of the collateral ligaments.

Treatment options: Closed reduction is impossible after 3 weeks. The remaining options are open reduction, interposition arthroplasty, arthrodesis and arthroplasty. Open reduction is the most accepted option.

Goals of treatment: The surgeon must remove the fibrosis and heterotopic ossification, release the contractures and reduce the elbow without causing nerve damage. Associated coronoid, radial head fractures and collateral ligament insufficiency should be addressed. An alternative method of ulnar lateral ligament reconstruction is demonstrated. The extensor origin should be carefully repaired.

Post-Operative Rehabilitation: The patient is placed in a hinged elbow brace for a period of 6 weeks.

TITLE: *CASTING MOTION TO MOBILISE STIFFNESS – THE SECRET TO UNLOCKING DIGITAL STIFFNESS.*

Author(s): **Robyn Midgley** *Medical Suite B7A, Hobart Grove, Bryanston, Johannesburg*

Aim of the study: A principle priority of hand therapy following any form of injury or intervention to the hand is to restore digital flexion. Historically this has been achieved through the application of mechanical stress to the affected digit(s) with splinting and exercise. However, the development of chronic stiffness in the injured and uninjured digits is a common complication that is often not resolved with traditional therapy, resulting in severe functional compromise.

Method: Four patients who presented with chronic stiffness and swelling following different surgical procedures were treated with the Casting Motion to Mobilise Stiffness Technique. The surgical procedures performed, type of casts applied, duration of casting, duration of treatment and cast exercises are described.

Results: All patients regained a normal pattern of digital flexion and normal hand function.

Conclusion: The use of the CMMS technique is beneficial as it promotes the release of joint tightness and tissue adherence so that tissue elongation can be regained and joint motion restored. CMMS can successfully mobilize severe stiffness that is unresponsive to traditional treatment.

TITLE: *OUTCOMES FOLLOWING STEROID INJECTIONS IN VARIOUS HAND CONDITIONS*

Author(s): **Michael Solomons; S Carter, M Maree**

Injectable steroids are used for diagnostic and therapeutic measures. We retrospectively reviewed a large database of hand patients to identify those who had steroids for trigger finger, De Quervains tendonitis, ulnar sided wrist pain and dorsal wrist syndrome. A 6-month review of the outcomes of these injections will be presented.

TITLE: *DUPUYTREN'S CONTRACTURE: IS IT TIME FOR A NEW APPROACH? / THE COLLAGENASE EXPERIENCE*

Author(s): **Zsolt Szabo**

TITLE: *PEDICLED VS FREE FLAPS IN UPPER LIMB RECONSTRUCTION*

Author(s): **Zsolt Szabo**

TITLE: *SYMBRACHYDACTYLY – A RETROSPECTIVE REVIEW OF 17 FREE TOE PHALANGEAL GRAFTS*

Author(s): **Steve Carter** *New Orthopaedic Unit, Vincent Pallotti Hospital*

Symbrachydactyly describes a spectrum of congenital hand differences consisting of digital loss.

The technique of non-vascularized toe phalanx to hand transfers has provided patients with improved outcomes.

Non-vascularized toe phalanx to hand transfers restores functioning length to a skeletally deficient poorly frotormy hand, while maintaining an overlying layer of vascular and sensate tissue.

The primary goal is improvement of digital length to enhance mechanical advantage and prehension.

We describe 17 free toe phalangeal transfers in 10 patients over the past 5 years, performed at the Red Cross Children's Hospital.

We review our technique of graft harvest and implants and current 3 year results of graft survival and patient outcomes.

TITLE: *"THE ELUSIVE TUMOUR"*

Author(s): **Ulrich Mennen** *Pretoria*

Experience with 13 referred patients (15 glomus tumours) in the last 10 years, has shown an unfortunate pattern of mismanagement.

The reason being that this tumour often does not feature high on the list of differential diagnoses of clinicians.

This, unfortunately, results in misdiagnoses and leads to inappropriate and unnecessary surgery, which of course does not solve the severe pain problem.

An overview of this tumour and an illustrative case study will be presented.

TITLE: *THAT'S WEIRD MAN!*

Author(s): **Michael Solomons**

Bizarre presentations of very rare conditions will occasionally present to the Hand Surgeon. The author has recently managed a case of FINGER APOPLEXY and another of EOSINOPHILC FASCIITIS. These cases will be discussed.

TITLE: *THE FIVE MOST IMPORTANT PEDICLED FLAPS OF THE UPPER LIMB*

Author(s): **Zsolt Szabo**

TITLE: *DEVELOPING AN ALGORITHM FOR ULNAR SIDED WRIST PAIN*

Author(s): **Michael Solomons**

Ulnar sided wrist pain remains a diagnostic and therapeutic dilemma. The author will present a management algorithm based on clinical experience and review the results of this approach.

TITLE: *ACUTE PERILUNATE DISLOCATIONS-IS RECONSTRUCTING THE SCAPHO-LUNATE LIGAMENT REALLY NECESSARY?*

Author(s): **Michelle Maree** *Martin Singer Hand Unit, Groote Schuur Hospital*
Michael Solomons

Perilunate and lunate dislocations are rare but serious injuries.

The standard of care is open reduction and reconstruction of the scapho-lunate interosseous ligament (SLIL).

We present a series of patients who had sustained acute peri-lunate or volar lunate dislocations following either a fall from a height or motor vehicle accidents They were all male and were seen at our unit within 3 weeks of injury. All had either closed or open reduction and K-wire fixation of the scapho-capitate and scapho-lunate articulations in a reduced position. However, none had an acute repair of the SLIL or subsequent reconstruction.

All were immobilised in BE POP. POP and K-wires were removed at 6 weeks.

We report on both clinical and radiological short-term (1 year) follow-up; assessing pain, instability, scapho-lunate distance, scapho-lunate angle and the presence of a high-riding scaphoid. We compare the results of patients undergoing acute repair of SLIL at the time of reduction as reported in the literature

The majority of patients have a favourable outcome comparable to those undergoing acute SLIL repair or reconstruction. We believe that a high-riding scaphoid is a more significant predictor of poor outcome than residual scapho-lunate diastasis.

TITLE: *LOCKED PLATES: THE POTENIAL FOR DISASTER*

Author(s): **Adrew Barrow** *Wits*

Aim: The aim of this study is to investigate the effect of locked plating on the time to union in 2 diaphyseal models. It is postulated that locked plates increase the time to union in diaphyseal bone.

Method: 18 consecutive midshaft clavicle fractures were randomly fixed using either locked or non-locked screws. 9 midshaft metacarpal fractures requiring plating were used as the second bone model, and also randomly fixed with locked and non-locked plates.

Results: There is a significantly increased time to radiographic union when plates are applied in a 'full' locking mode.

Conclusion: With the wave of enthusiasm surrounding locked plating we must be careful in the understanding of biomechanical principles. Locked plates have a purpose but may be detrimental in certain instances.

TITLE: *THE SURGICAL MANAGEMENT OF THE DORSAL WRIST SYNDROME (DWS)*

Author(s): **Michael Solomons**

DWS is a common presenting condition that is often under diagnosed and over investigated. It represents a broad spectrum that includes occult wrist ganglions and dynamic Scapholunate dissociation. Failure of conservative measures can be dealt with surgically. A small series will be presented.

TITLE: *LONG TERM RESULTS (25 YEARS) IN PROSTHETIC REPLACEMENT OF THE CARPAL BONES*

Author(s): **Zsolt Szabo**

TITLE: *TREATMENT OF SCAPHOID FRACTURES. IS IT A PROBLEM?*

Author(s): **Zsolt Szabo**

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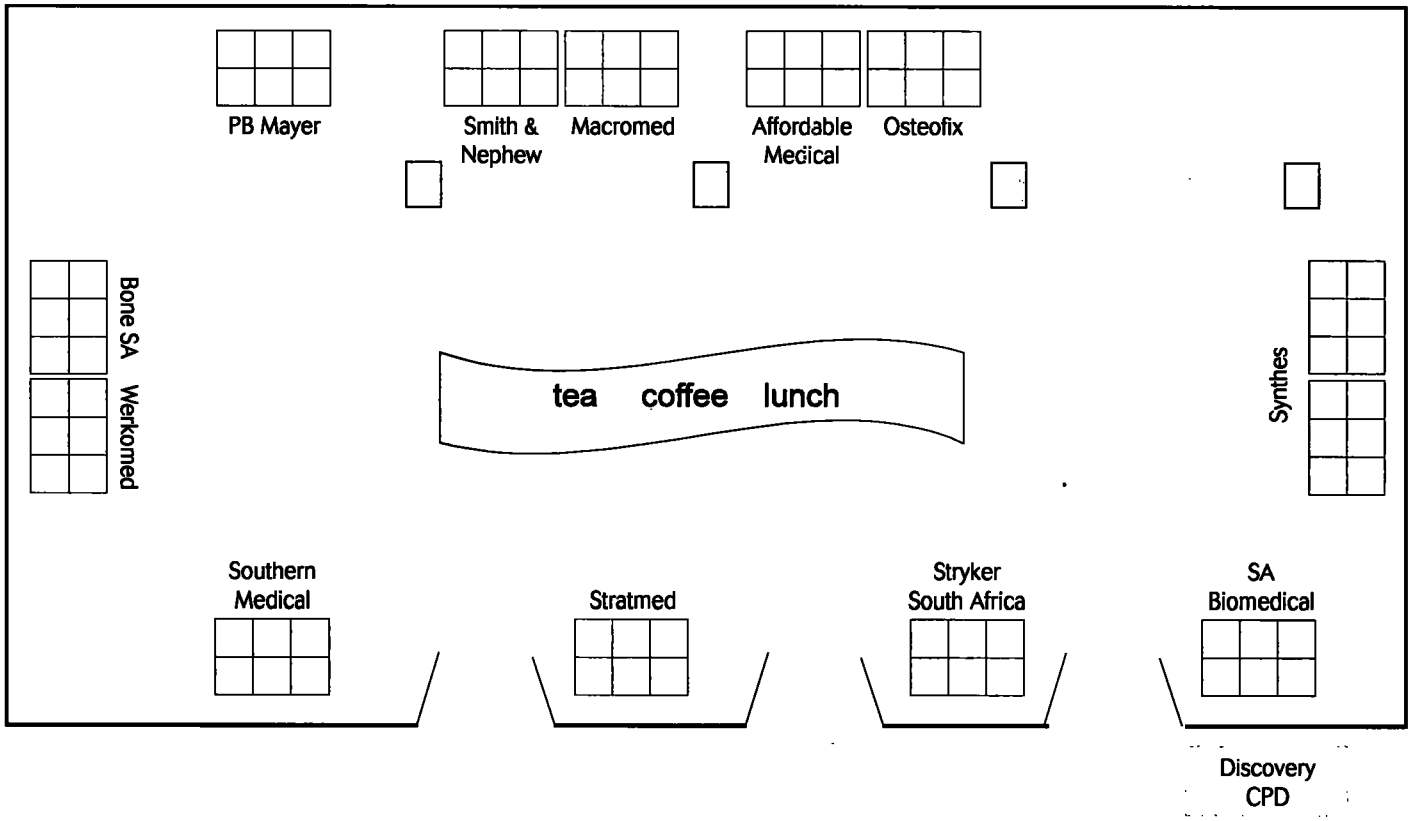

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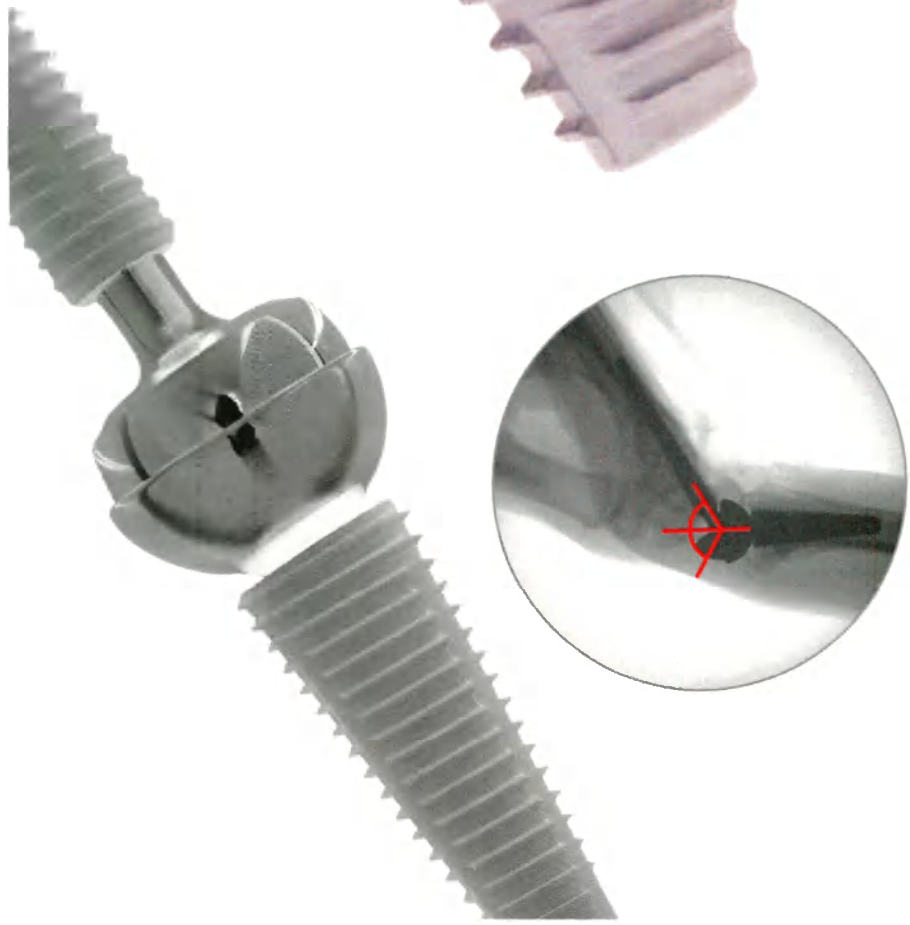

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