THE SOUTH AFRICAN SOCIETY FOR SURGERY OF THE HAND

47TH CONGRESS

CSIR CONVENTION CENTRE
PRETORIA, GAUTENG, SOUTH AFRICA

26 – 28 AUGUST 2016

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INTEGRA LIMIT UNCERTAINTY

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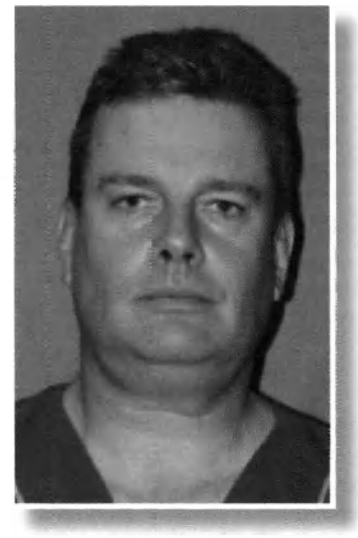
Welcome Message from the President



Dr Roger Nicholson

A warm welcome to all delegates. In addition to our local faculty we are lucky enough to have two international guests for this year's congress. Please remember this is an informal meeting and it is up to you, the audience, to engage and challenge the speakers during the discussions.

If something is unclear then ask for it to be explained. If you disagree then lets all hear why.

I hope you enjoy the meeting and we all learn a lot.

Welcome Message from the Congress Organiser

Dr Erich Mennen

Dear delegates

Spring is in the air and we would like to thank you for attending the 47th Congress of the S.A.S.S.H.

A special welcome to our esteemed guests who have travelled far to share their knowledge and experience with us.

In particular Dr Thomas Trumble from Seattle, Dr Simon Moyes from the UK and Dr Martin Kirschner from Germany.

Prof Christa Janse van Rensburg, Dr Johan Smuts and Dr Mark Velleman have been so kind to address us on their respective fields of interest.

Mr Angus Taylor is a very well-known sculptor and I look forward to his talk on the hand.

I hope you enjoy the congress and please attend the dinner on Saturday evening.

Yours sincerely
Erich Mennen

International Visitor

Dr Thomas Trumble

Dr Thomas Trumble, M.D. completed medical school at Yale University School of Medicine and he continued his orthopaedic residency at Yale New Haven Hospital.

After completing residency training, Dr Trumble completed a Hand and Microsurgery Fellowship at Duke University in 1984 followed by a Hand and Reconstructive Fellowship at Harvard University at the Massachusetts General Hospital.

He taught at Yale University for four years as an assistant professor before moving his family in Seattle to join the University of Washington.

For twenty years he served as chief of the hand surgery service and the director of the fellowship training.

Tom was the Ed tor of Hand Surgery Update IV which is a fantastic overview including video techniques of our complex field.

International Visitor

Dr Martin Kirschner

Dr Martin Kirschner is an Associate Professor of Orthopaedics at Hanover University in Germany. He completed his doctoral degree at the University of Hamburg and became an Associate Professor at the University of Munich.

After working extensively in Bavaria for many years, he returned to his home town, Hamburg where he is Medical Director and member of the Board of Syntellix.

He has a keen interest in hardware applications in Hand Surgery.

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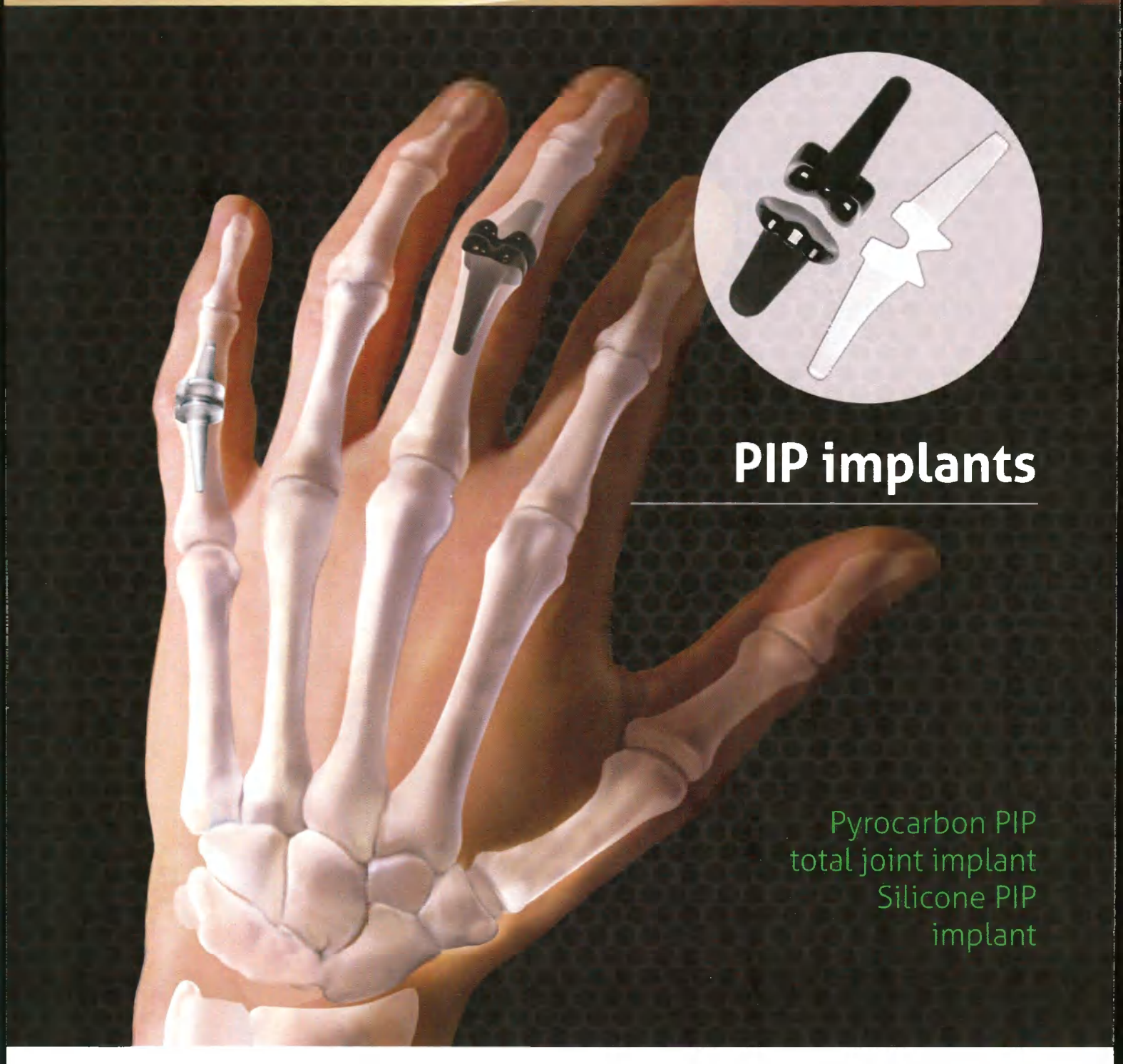

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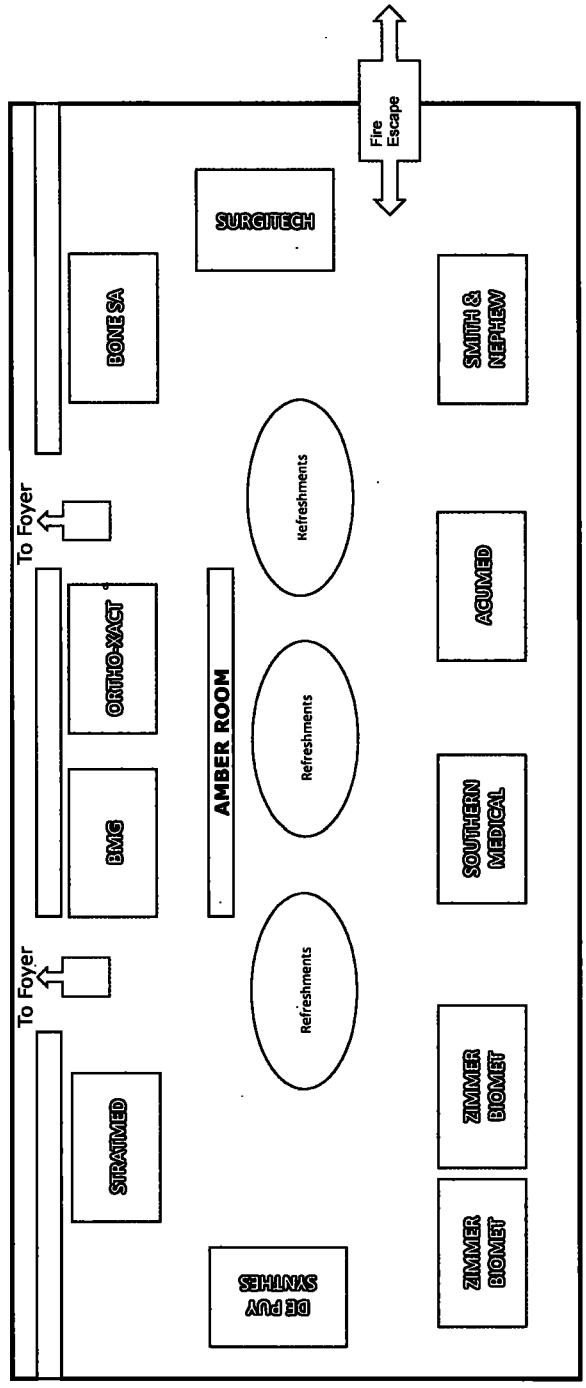
Trade Exhibitor Floor Plan

The President and Executive Committee of SASSH would like to thank the trade for their attendance and participation of this event



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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

TRADE EXHIBITORS

Kindly make every effort to visit all the stands

Teas and lunches will be served in the trade exhibition area

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 Sentinel Room (Trade exhibition area). Please feel free to visit the Desk should you require any assistance

SMOKING

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

2015 Congress

Organizing Committee

Congress Chairman	Erich Mennen
Congress Coordinator	Andi Askew

Social

Get-together (Optional)	Friday 26 August 2016 from 18h30 onwards Join us at the Koi Restaurant in Lynwood Bridge where we invite you to meet and greet colleagues and friends. Drinks are on us!
Congress Dinner	Saturday 27 August 2016 19h30 for 20h00 Jade Room - Lower level in the CSIR Convention Centre Dress: Smart Casual

Future Events

ANNUAL REFRESHER COURSE

2017	24-26 February Topic: Hand Trauma /Infection Tumour /Rehab Guest Speaker: David Warwick Professor of Hand Surgery, Southampton University Hospitals, UK Venue: The Vineyard Hotel, Cape Town

ANNUAL CONGRESS

2017	1 - 3 September 48th Congress and Instructional Course Venue Port Elizabeth

Office Bearers

President	Roger Nicholson
Honorary Secretary/Treasurer	Martin Wells
Members	Erich Mennen Ajmal Ikram Michael Solomons Nikki van der Walt
Executive Secretary/Congress Coordinator	Andi Askew
Office	✉ 2721, Bellville SA 7535 ☎ 084 055 1152 www.sassh.co.za sassh@iafrica.com

Past Presidents

11969-1971	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
2011 - 2013	J van der Westhuizen
2013 - 2015	E Mennen

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?"
2012	DR ZSOLT SZABO "The Human Hand - The Most Beautiful Tool"
2013	DR JOHAN VAN DER WESTHUIZEN "SASSH - Why do we belong"
2014	DR RAJAH SABAPATHY "Looking back the last 25 years - the lessons learnt"
2015	DR ERICH MENNEN "Stone Circles"

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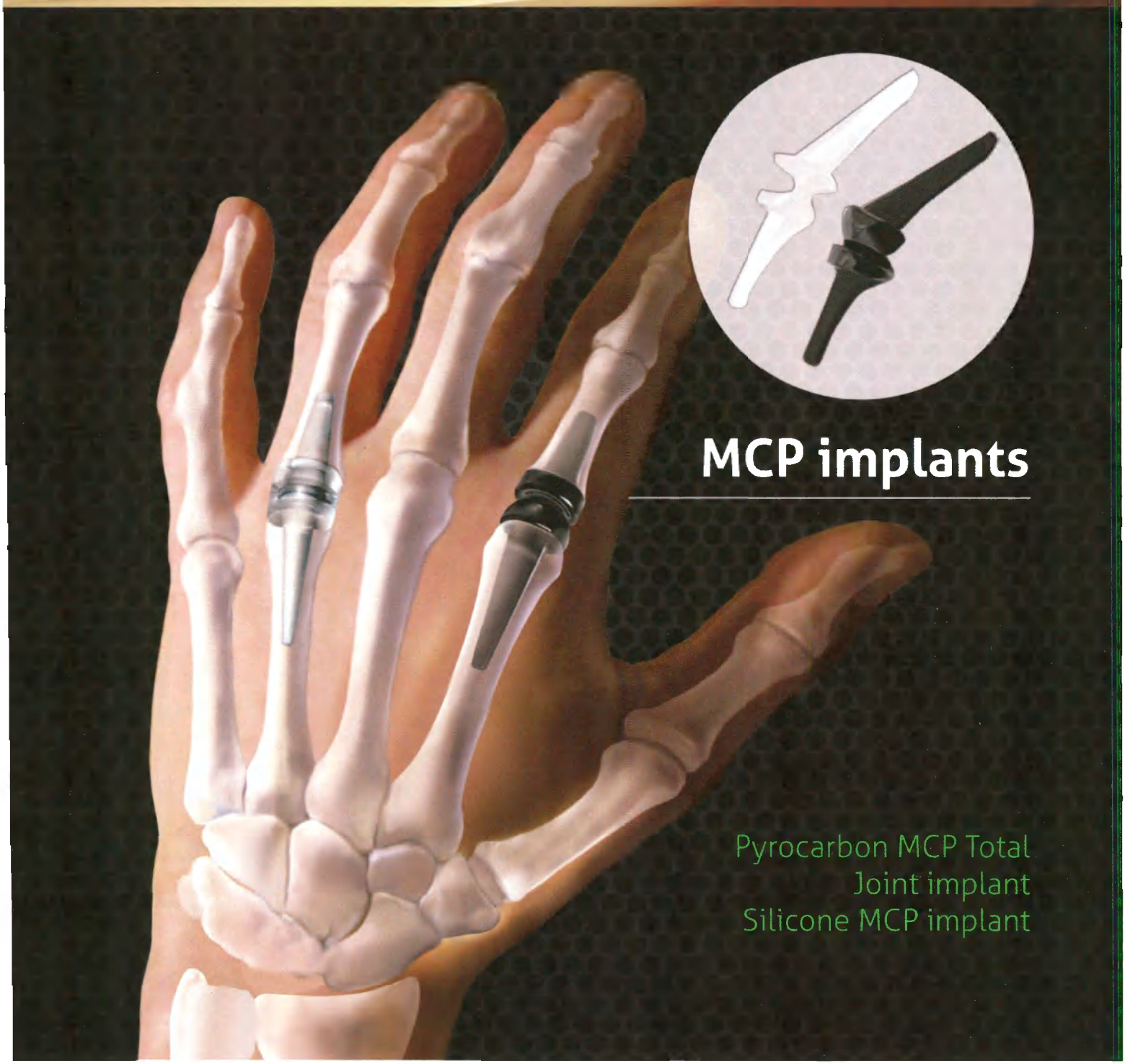

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Scientific Program

47th ANNUAL CONGRESS AND INSTRUCTIONAL COURSE
27 - 28 AUGUST 2016
CSIR CONVENTION CENTRE, PRETORIA

Saturday 27 August 2016

0730-0750	Delegate Registration	
0750-0800	Welcome and Announcements	E Mennen
SESSION 1	CHAIR : DR ROGER NICHOLSON	
0800-0810	A very rare case of a very virulent pathogen	M Solomons
0810-0815	Discussion	
0815-0825	3-4 Extensor Inter-retinacula structural T-shape graft for scapholunate ligament reconstruction: A novel concept	D van der Spuy
0825-0830	Discussion	
0830-0840	Scaphoid Non Union	T Trumble
0840-0845	Discussion	
0845-0855	Chronic exertional compartment syndrome in the forearm - using MRI scan to confirm the diagnosis	N van der Walt
0855-0900	Discussion	
0900-0910	A Retrospective Review of 87 Endoscopic Carpal Tunnel Releases Done Over a 5 Year Period	S Carter
0910-0915	Discussion	
0915-0925	The 'Volkmann's Ischaemic Contracture: A case report of neglect	O Afulo
0925-0930	Discussion	
0930-0940	A technique of one stage functional reconstruction of the hand in Apert syndrome	R Nicholson
0940-0945	Discussion	
0945-0955	Proximal Phalanx fracture in a musician: Mobilization protocol and outcomes achieved : A case Study	M Kruger
0955-1000	Discussion	
1000 -1030	**TEA**	
SESSION 2	CHAIR : DR ERICH MENNEN	
1030 -1100	RA vs OA: Key points in diagnosis and management	C J.van Rensburg
1100 -1110	Early results following Supinator nerve transfer to PIN	F de V Theron
1110 -1120	Deltoid recovery after long head of triceps to anterior axillary nerve transfer	J Charilaou
1120 -1125	Discussion	

1125 -1135	Assessment of pre-operative wrist extensor strength in tetraplegia	I Koller
1135 -1140	Discussion	
1140 -1150	The use of triceps and wrist extension rather than deltoid and biceps in the decision making for obstetric palsy	M Solomons
1150 -1155	Discussion	
1155 -1205	Latissimus dorsi flexoplasty in three scenarios: Trauma, Arthrogryposis and Paediatric Brachial plexus injury	B Monaisa
1205 -1210	Discussion	
1210 -1230	Tendon Transfers	
1230-1330	**LUNCH**	
SESSION 3	CHAIR : DR MICHAEL SOLOMONS	
1330 -1340	Patient satisfactions following surgery for basal thumb arthritis: Swanson's silicone interposition arthroplasty vs excision arthroplasty using the mini-tightrope technique	M Carides
1340 -1345	Discussion	
1345 -1355	Ball- and socket trapezium-less pollicisation	J Mennen
1355 -1420	DRUJ instability	T Trumble
1420 -1425	Discussion	
1425 -1435	The Effect of Lunate Morphology on the 3-Dimensional Kinematics of the Carpus using a Hexapod Robot	D McGuire
1435 -1440	Discussion	
1440 -1450	Dorsal Wrist ganglion excision with dry wrist arthroscopy	A Ikram
1450 -1455	Discussion	
1455 -1505	A comparison of the outcomes of two rehabilitation protocols after flexor tendon repair of the hand at Chris Hani Baragwanath Academic Hospital (CHBAH), Johannesburg, South Africa	R Wentzel
1505 -1510	Discussion	
1510-1545	**TEA**	
SESSION 4	CHAIR : DR NIKKI VAN DER WALT	
1545 -1555	Acute Carpal Tunnel syndrome: A case report and review of the Literature	G Biddulph
1555 -1605	The Aetiology of Acute Traumatic Occupational Hand Injuries seen at Chris Hani Baragwanath Academic Hospital	A Stewart
1605 -1610	Discussion	
1610 -1620	Scapholunate ligament reconstruction using the Arthrex Mini Tightrope® - Preliminary follow up of the first cases	P Jordaan
1620 -1630	Zone 9 Extensor Tendon Injuries - Is there a reliable way of managing These? A review of Clinical experience at Groote Schuur Hospital	Z Moonda
1630 -1635	Discussion	

1635 -1645	Fixation of distal radius fractures with dorsal locking plate compared Volar lock plating and Fragment specific fixation of distal radius	A Ikram
1645 -1655	The casting motion to mobilise stiffness technique for the rehabilitation after a crush and de-gloving injury of the hand	R Midgley
1655 -1705	Isolated unilateral agenesis of the proximal carpus: A case report	S Smith
1730	Annual General Meeting (members only)	
1930	Congress Dinner	

Sunday 28 August 2016

0730-0800	Delegate Registration	
SESSION 5	CHAIR : DR MARTIN WELLS	
0800 - 0820	Staying out of Trouble	T Trumble
0820 - 0830	Discussion	
0830 - 0900	Neurologist Diagnosis	J Smuts
0900 - 0910	Discussion	
0910 - 0930	Flexor Tendon	T Trumble
0930 - 0940	Discussion	
0940-1000	MAGNEZIX® - a new era in orthopaedic surgery	M Kirschner
1000-1010	Discussion	
1010-1040	**TEA**	
SESSION 6	CHAIR : DR ROGER NICHOLSON	
1040-1110	Ulnar shortening	T Trumble
1110-1120	Discussion	
1120-1155	MRI diagnosis of upper limb orthopaedic conditions	M Velleman
1155-1205	Discussion	
1205-1250	Stem cell therapy	S Moyes
1250-1300	Discussion	
1300-1400	**LUNCH**	
SESSION 7	CHAIR : DR AJMAL IKRAM	
1400 -1445	20th AC Boonzaier Lecture: The Hand in Sculpture	Angus Taylor
1445-1500	My experience as a fellow in the USA	C Sathekga
1500 -1520	Magnesium implants in clinical use	M Kirschner
1520 -1530	Discussion	
1530	Closure of Congress	E Mennen

Abstracts

TITLE ACUTE CARPAL TUNNEL SYNDROME: A CASE REPORT AND REVIEW OF THE LITERATURE

Author(s) **Dr LG Biddulph**

Wits University Orthopaedic Department, PO Box 2866, Houghton, 2041

Acute Carpal tunnel syndrome is a rare condition. It is usually associated with trauma but may also have other causes. It requires prompt diagnosis and treatment to avoid permanent nerve damage.

Carpal tunnel syndrome is the most common compression neuropathy. It is a chronic progressive condition with well-known symptoms of pain, paresthesia, numbness and weakness in the radial three and a half fingers. Treatment options are well described in the literature.
We present a case of an acute carpal tunnel syndrome in a 23 year old female with no history of trauma. At surgery a thrombosed persistent median artery was found.

A review of the literature highlighting diagnosis and treatment will be presented.

TITLE THE AETIOLOGY OF ACUTE TRAUMATIC OCCUPATIONAL HAND INJURIES SEEN AT CHRIS HANI BARAGWANATH ACADEMIC HOSPITAL

Author(s) **A. Stewart, G. Biddulph, G.B Firth**

Background

- Acute traumatic occupational hand injuries are the second most common cause of all traumatic hand injuries in both developed and developing countries, after motor vehicle accidents. Acute traumatic occupational hand injuries are one of the leading causes of all hand injuries seen in a hospital setting. The hand is the most commonly injured body part during occupational accidents. The aetiology of these injuries is unknown in the South African setting.

Objective

- The purpose of this observational, cross-sectional study is to describe the demographics, aetiology and associated occupational risk factors of patients admitted to a Tertiary Hospital in the Gauteng Province, South Africa with acute traumatic occupational hand injuries.

Methods

- The study was started in January 2016 and is ongoing. Male and female patients over the age of 18 years were interviewed using a specially designed questionnaire. The questionnaire includes basic demographics, handedness, average annual income, type of employment and nature of occupation, specific skills, training and work experience. The injury characteristics were documented and the Hand Injury Severity Score (HISS) was calculated for each patient.

Results

- A total of 20 patients were interviewed, of which18 were male (90%). Forty five percent of the participants achieved a level of education of grade 8 or less. Eighty five percent of the participants were considered the 'primary breadwinner' in their household. The majority of patients earned between R1600 - R8000 per month. Half the participants were considered to have 'formal employment', whilst the other half worked as informal labourers. No patients were registered with the Workers Compensation Assistance (WCA)
- Seventy five percent of the participants had no formal occupational specific training.

- Thirty five percent of the injuries occurred in Machine Operators. The source of injury was a powered hand tool in 40% of the cases and a powered machine in 30% of the cases (Total 70%). Only 15% of the participants were wearing protective gloves at the time of injury.
- The most common injuries were laceration and crush injuries with associated fractures. According to the Hand Injury Severity Score, 15 patients had mild injuries, 3 patients had moderate injuries, and 2 patients sustained major injuries. The average HISS score for patients injured from a powered tool/machine was significantly higher than the HISS score for patients injured from a non-powered tool. (34 vs 7)

Conclusions

- Traumatic occupational hand injuries in this setting occur most commonly in machine operators and involve lacerations and crush injuries. Use of protective gear is extremely low (15%) and occupational health and safety education must be increased.

TITLE CHRONIC EXERTIONAL COMPARTMENT SYNDROME IN THE FOREARM - USING MRI-SCAN TO CONFIRM THE DIAGNOSIS

Author(s) **Dr N.H. van der Walt, Dr Mark Velleman**

Exertional compartment syndromes of the forearm are far less common than in the lower extremities. It is an exercise related condition leading to forearm pain and transient upper limb dysfunction. This can be severely disabling to the top class competitor having a detrimental effect on performance.

Traditionally clinical examination, pressure measurement and electromyography was used to confirm the diagnosis. More recently the role of magnetic resonance imaging in confirming the diagnosis has been explored and used as a safe noninvasive alternative.

We performed MRI-scanning on 8 patients with clinical symptoms of chronic exertional compartment syndrome confirming the diagnosis in 12 forearms. All 8 patients subsequently were treated with forearm compartment decompression and have returned to their previous activities and/or levels of competition with complete relief of their symptoms.

We therefore conclude that chronic exertional compartment syndrome of the forearm can consistently be correctly diagnosed by an MRI-scan and effectively treated by surgical decompression.

TITLE A RETROSPECTIVE REVIEW OF 87 ENDOSCOPIC CARPAL TUNNEL RELEASES DONE OVER A 5 YEAR PERIOD

Author(s) **Dr Steve Carter**

We reviewed our results of 87 consecutive endoscopic carpal tunnel releases from 2011 to 2016.

The endoscopic procedure was a single portal entry using the micro-air system.

All the patients were female average age 44.

21 patients had bi-lateral endoscopic releases.

There were 3 intra-operative failed releases due to poor visualization and these were converted to open releases.

There were 5 additional procedures performed.

There was no incidence of median or other nerve damage.

No redo carpal tunnel releases have been performed on this cohort of patients.

We conclude that the endoscopic carpal tunnel release is simple, effective with a low morbidity.

TITLE ISOLATED UNILATERAL AGENESIS OF THE PROXIMAL CARPUS: A CASE REPORT

Author(s) **S. Smith, V. Singh, C. Sathekga**

Agenesis of carpal bones are normally associated with congenital hemimelia or ectodactyly. The agenesis of particular carpal bones usually follows specific patterns: radial anomalies associated with scaphoid trapezium and trapezoid; central anomalies with capitate, hamate and part of the trapezium; ulnar anomalies with triquetrium, pisiform and hamate. Reported literature of isolated carpal agenesis, without carpal coalition is even rarer. We report a case of a 25 year old man presenting with an incidental finding of unilateral agenesis of the proximal row of the carpus. His initial presentation to our unit was following minor trauma to the same wrist and contralateral ankle. X-rays of both joints showed no acute trauma. X-rays of the contralateral carpus and both tarsi showed no abnormality. On history, he reports only occasional pain, with no functional limitation in the affected wrist. He has no other obvious dsmorphic features. A search of the English literature, has not revealed a reported case that involves isolated carpal agenesis, without associated congenital anomalies or carpal coalition.

TITLE ZONE 9 EXTENSOR TENDON INJURIES - IS THERE A RELIABLE WAY OF MANAGING THESE? A REVIEW OF CLINICAL EXPERIENCE AT GROOTE SCHUUR HOSPITAL

Author(s) **Dr Zaheer Moonda**

In a society where there is high prevalence of sharp trauma to the upper limb, a considerable amount of forearm flexor and extensor tendon injuries are seen.

While there is a lot of literature documenting various ways of managing flexor tendon injuries in various zones, as well as Zone 1 - 8 extensor tendon injuries, the literature is sparse on the correct management of Zone 9 extensor injuries.

Zone 9 is defined as the proximal forearm and involves the muscle belly or musculo-tendinous junction. These often have an associated neurological injury. Repair of the muscle belly or muscle tendon junction is sometimes carried out, while other patients are treated with extension splinting only.

In this study we will review patients who have presented to the Martin Singer Hand Unit at Groote Schuur Hospital, Cape Town, who have been treated both operatively with tendon or muscle belly repair in conjunction with post operative extension splinting, as well as those who have been managed conservatively with extension splinting alone.

We will attempt to define and compare stiffness, range of motion and overall function of the patients treated in the two ways, and in so doing make recommendations on correct management of these injuries.

TITLE LATISSIMUS DORSI FLEXORPLASTY IN THREE SCENARIOS: TRAUMA, ARTHROGRYPOSIS, AND PAEDIATRIC BRACHIAL PLEXUS INJURY

Author(s) **Prof Elias Ndobe, Dr Brian Monaisa**

Elbow flexion is essential for hand function. Patients may require restoration of elbow flexion secondary to traumatic or congenital causes, the most common being brachial plexus injury. Various reconstructive options are available, and currently microsurgical techniques are considered essential, via either nerve or free functional muscle transfers. Pedicled elbow flexorplasty options include the latissimus dorsi, pectoralis major and Steindler flexorplasty. The pedicled latissimus dorsi is a workhorse flap, and is relatively easy to raise, with minimal donor site morbidity. We present our use of the latissimus dorsi musculocutaneous flap for reconstruction of elbow flexion in three different clinical scenarios.

The first patient is an adult male who presented for emergency cover of the elbow following traumatic avulsion of his brachial artery, biceps muscle and musculocutaneous nerve. The latissimus dorsi was used primarily to provide cover following a reversed saphenous vein graft, with restoration of elbow flexion a secondary goal.

The second patient was a four-year-old girl with asymmetric arthrogryposis, involving the shoulder, elbow and wrist.

The third patient was a five-year-old boy with paediatric brachial plexus injury, with C5 and C6 root avulsions with an inability to flex the elbow. He presented following a rotational humerus osteotomy, and FCU to ECRB tendon transfer.

We have found this reconstruction to be reliable and easy to perform, with good results. We will present a literature review of the various reconstructive options available and an algorithm for reconstruction of elbow flexion.

TITLE THE USE OF TRICEPS AND WRIST EXTENSION RATHER THAN DELTOID AND BICEPS IN THE DECISION MAKING FOR OBSTETRIC PALSY

Author(s) **M Solomons, M Maree, D McGuire**

The most common indication for intervention in obstetric brachial plexus palsy is failure of elbow flexion and/or deltoid by 3 or 4 months. These muscles and actions can be difficult to assess in the infant. The interpretation is also subjective. There are two reasons to use triceps and wrist extension rather than biceps and deltoid. One is that it is easier to assess these muscles objectively and secondly, if the wrist extension/triceps fails to recover then it is very unlikely that the elbow flexion or abduction will recover. This is because the plexus 'fails' sequentially. C5 is worse than C6 which is worse than C7.

The Martin Singer has been using this algorithm for 10 years and a large database will be presented. Of particular interest is an analysis of those patients who would have had surgery if assessed by the criteria of failure to achieve flexion of the elbow by 3 months.

TITLE A VERY RARE CASE OF A VERY VIRULENT PATHOGEN

Author(s) **M Solomons**

A 70 year man presented with a chronic induration of the right hand following a penetrating injury by means of a thorn. A very delayed diagnosis of scedosporium prolificans was made.

The treatment and microbiology of this pathogen will be discussed.

TITLE THE "BALL-AND-SOCKET TRAPEZIUM-LESS" POLLICISATION

Author(s) **Ulrich Mennen**

Having done over 2100 excision arthroplasties for osteo-arthroses of the first carpo-metacarpal joint of the thumb with a patient satisfaction VAS rate of 95.8 %, it became obviously evident that the thumb does not need a trapezium.

Myths such as thumb shortening, scaphoid abutment, thumb weakness, narrowing of the first web, ligament reconstructions etc. have been convincingly disproved with this huge series.

It is with this conviction that a series of pollicisations have been done without the cumbersome creation of a pseudo-trapezium.

The surgical procedure of pollicisation is markedly simplified and the surgical time is reduced by more than a third. This technique also results in a thumb with the normal multi-directional mobility, rather than the one-dimensional flexion-extension movement of the quasi-trapezium created from the metacarpal epiphysis for the newly pollicised index finger.

The ball-and-socket configuration is inherently stable, and therefore does not need any ligamentous reconstruction.

This series shows again that a trapezium is not necessary for a good functional thumb!

TITLE PATIENT SATISFACTION FOLLOWING SURGERY FOR BASAL THUMB ARTHRITIS: SWANSON'S SILICONE INTERPOSITION ARTHROPLASTY VS EXCISION ARTHROPLASTY USING THE MINI-TIGHTROPE TECHNIQUE

Author(s) **M. Carides**

Introduction and Aims

- The aim of this study is to report patient satisfaction and time to pain-free recovery following Swanson's interposition arthroplasty versus excision arthroplasty using the Mini-Tightrope technique.

Method

- 100 Consecutive patients who underwent surgery for end-stage CMC joint or pantrapezial arthritis have been reviewed retrospectively. There were 50 patients. In each group, 13 males and 37 females with a mean age of 66 years in the implant group and 6 males and 44 females with a mean age of 64 years in the tightrope group. Subjective patient assessments were recorded using the Modified Nelson Score (J Hand Surg Eur Vol. 2007 Oct;32(5):524-8).

Results

- Patients satisfaction was assessed by return of questionnaire. The minimum period of follow-up was 10 months following surgery. The mean Nelson Score was 82.3 in the implant group and 78.9 in the tightrope group. Mean time to pain-free recovery was 11 weeks in the implant group and 10 weeks in the tightrope group. T-scores measured 0,73 and 0,26 respectively (P = 0.18).

Conclusion

- There is no statistical difference in this study, both in patient satisfaction or in time to recovery, following Swanson's silicone interposition arthroplasty and excision arthroplasty using the Mini-Tightrope technique for end-stage basal thumb arthritis.

TITLE THE EFFECT OF LUNATE MORPHOLOGY ON THE 3-DIMENSIONAL KINEMATICS OF THE CARPUS USING A HEXAPOD ROBOT

Author(s) **D McGuire, G Bain, H Clitherow, F Fraysse, D Thewlis**

Aims

- To assess carpal kinematics in various ranges of motion in 3 dimensions with respect to lunate morphology.

Methods

- Eight cadaveric wrists (4 type I lunates, 4 type II lunates) were mounted into a hexapod robot that allowed controlled motion with 6 degrees of freedom. The wrists were moved through flexion-extension and radioulnar deviation. The relative motion of the radius, carpus, and third metacarpal were recorded using optical motion capture methods.

Results

- Clear patterns of carpal motion were identified. Significantly greater motion occurred at the radiocarpal joint during flexion-extension of type I wrist than a type II wrist. The midcarpal articulations were relatively restricted during flexion and extension of a type II wrist. However, during RUD, the midcarpal joint of the central column became the dominant articulation.

Conclusions

- This study describes the effect of lunate morphology on 3-dimensional carpal kinematics during wrist flexion and extension. The results represent an advance on the current understanding of this topic. Differences in carpal kinematics may explain the effect of lunate morphology on pathological changes within the carpus. Differences in carpal kinematics due to lunate morphology may have implications for the management of certain wrist conditions.

TITLE DELTOID RECOVERY AFTER LONG HEAD OF TRICEPS TO ANTERIOR AXILLARY NERVE TRANSFER.

Author(s) **Johan Charliaou**

Deltoid reanimation after upper brachial plexus injuries can be difficult. One option is to graft the posterior division of the upper trunk or graft the axillary nerve directly. Somsak described the use of the nerve from the long head of triceps to transfer to the anterior division of the axillary nerve.

We present a review of adult patients who sustained traction or penetrating injuries to the brachial plexus. Consecutive patients at Groote Schuur and Vincent Pallotti Hospitals from 2008 to 2014 undergoing the Somsak procedure were included. The minimum follow-up was 2 years.

Deltoid function was assessed as abduction power, range of motion, endurance and muscle bulk. Sensibility of the axillary nerve was not assessed. Donor site morbidity was documented after assessing the triceps muscle power.

TITLE ASSESSMENT OF PRE OPERATIVE WRIST EXTENSOR STRENGTH IN TETRAPLEGIA. A REVIEW OF A SIMPLE CLINICAL TEST TO DETERMINE ADEQUACY FOR ECRL TENDON TRANSFER.

Author(s) **Dr Ian Koller, Dr Michael Solomons, Dr Mark Smeulders**

Introduction

- Upper limb surgery for the tetraplegia patient offers improved hand function allowing for increased independence and quality of life. Functional wrist extension is a prerequisite for successful reconstruction . A transferable extensor carpi radialis longus (ECRL) tendon is key to achieving improved outcomes but cannot be at the expense of effective wrist extension. The decision to transfer ECRL can sometimes be difficult as there is no clinical way of knowing whether ECRB will be strong enough in isolation. A lieu stated that an intact pronator teres correlates with adequate wrist extension strength. Mohamed relied on a positive "bean sign". To date we have relied upon clinical judgment based on a subjective single finger resistance test of wrist extension strength.

Aim

- To evaluate our clinical test used to assess pre operative wrist extension strength.

Methods

- Appropriate patients were identified from the Western Cape Rehab. Centre's tetraplegia clinic. Pre and post op measurements of wrist extension strength were made using a Jamar pinch dynamometer. Control measurements were made on healthy volunteers. The other described clinical tests were also performed.

Results

- No patients had inadequate wrist extension post op after ECRL transfer based on our single finger extension test. Further findings will be presented.

TITLE A COMPARISON OF THE OUTCOMES OF TWO REHABILITATION PROTOCOLS AFTER FLEXOR TENDON REPAIR OF THE HAND AT CHRIS HANI BARAGWANATH ACADEMIC HOSPITAL (CHBAH), JOHANNESBURG, SOUTH AFRICA.

Author(s) **Roxanne Wentzel, Corrianne van Velze, Elsje Rudman**

Aims

- To compare the outcomes of an early active motion (EAM) protocol to the outcomes of an early passive motion (EPM) protocol in patients with zone II to IV flexor tendon repairs of the hand attending rehabilitation at CHBAH.

Methods

- Patients (n=46) who sustained a zone II-IV flexor tendon injury were recruited for the study and equally distributed between the two groups (early active motion and early passive motion). Out of these participants, 11 did not return for the initial assessment at 4 weeks post-surgery and were therefore excluded. There were 19 participants in the early active motion group, and 16 participants in the early passive motion group. Results were collected and classified at 4, 8 and 12 weeks post-surgery.

Results

- At 12 weeks post-surgery, the total active motion, fingertip to table and distal palmar crease measurements were similar between the two groups. Tendon rupture occurred in 8.57% (n=3, early active motion=5.71%, early passive motion=2.86%) of patients.

Conclusion

- This study found that there was no difference in outcomes between the two groups. Therefore either protocol could be implemented in South African public hospitals. However, since the early active motion protocol takes less time to implement, this protocol is recommended. A larger study would be necessary to determine a significant comparison between the two groups, however this is challenging due to poor patient compliance

TITLE DORSAL WRIST GANGLION EXCISION WITH DRY WRIST ARTHROSCOPY

Author(s) **Ajmal Ikram, Dirk Van Der Spuy**

Aims of study:

- Dorsal wrist ganglion(DG) are associated with pain, interference with ADL's, weakness and increase in size, for these reasons patient seeks treatment. Surgical treatment with open excision is gold standard, we have done excision of these ganglion with dry wrist arthroscopic technique and would like to share our early results. Method: We performed wrist scope in 12 patients with dorsal wrist ganglion or occult ganglion with painful wrist and in whom conservative treatment failed. Wrist was scoped with dry arthroscopic technique from the 2nd compartment or 6 R portal to prevent puncturing the ganglion. After localisation of the ganglion the shaver was passed and ganglion was excised with dorsal capsule. Any other intra-articular pathology was documented and dry dressing was applied. The patients were then asked to followed up at 2 weeks and 3 months. Incision size and tourniquet times were recorded. Complications were reviewed. At 3 months the range of wrist movements were measured.

Results:

- At 3 months the average DASH score is 11.8. Tourniquet times at an average was are 29.5 minutes. Average return to functior was two weeks. At three months most of the patients had ful' wrist movements. The arthroscopy scars were healed well and there were no complications from wrist arthroscopy. Two patients needed open ganglion excision due to inability to find the stalk of the ganglion with scope. There was no early reoccurrence.

Conclusion:

- Arthroscopic excision of DG has advantage of early return to function and smaller incision, there is also less post-operative pain and with dry technique there is no extravasion of fluid in the wrist If needed open surgery can be performed in complex wrist ganglion which has origin other than SL area.

TITLE FIXAT'ON OF DISTAL RADIUS FRACTURES WITH DORSAL LOCKING PLATE COMPARED VOLAR LOCK PLATING AND FRAGMENT SPECIFIC FIXATION OF DISTAL RADIUS - A CASE SERIES

Author(s) **Ajmal Ikram**

Aims of study:

- Assess and compare the functional and radiological results in patients treated with the dorsal locking plate (DLP), Volar Locking Plate (VLP) and Fragment Specific fixation (FSF) of distal radius fractures

Method:

- All patients who presented to our institution with complex intra- articular distal radius fractures had C.T scan of the radius according to the fracture pattern either had volar lock plating or Fragment specific fixation or dorsal locking plate fixation of the distal radius.

  Dorsal radius locking plate was used for following indications,

  1. Dorsal Barton fractures
  2. Comminuted dorsal rim fracture of the distal radius
  3. Suspected SL ligament injury with distal radius

  These patients were then asked to be followed up at 2 weeks, 6 weeks, 3 months and 6 months. The radiological parameters, i e radial height, inclination and tilt were compared as well as the functional outcomes by means of DASH score. Incision size and tourniquet times were recorded. Complications were reviewed.

Results:

- Currently we have included 10 patients each group. At 3 months the average DASH scores are Tourniquet time is comparable in VLP and DLP group and longer in FSF patients. The radiological parameters are statistically comparable. We will be presenting our early results.

Conclusion:

- Fixation of the distal radius fractures with dorsal plate allows direct visualization of joint cartilage to obtain anatomic reduction and assessment of intercarpal ligaments. Earlier dorsal radius implants had high complications but the new design and locking screws may allow stable fixation to get early range of movements as with other methods of fixation.

TITLE 3-4 EXTENSOR INTER-RETINACULAR STRUCTURAL T-SHAPE GRAFT FOR SCAPHOLUNATE LIGAMENT RECONSTRUCTION: A NOVEL CONCEPT. PROPOSED TECHNIQUE AND CASE STUDIES.

Author(s) **Dr Dirk van der Spuy**

The scapholunate ligament remains a key ligament in the stability of the carpus and its integrity ensures smooth carpal kinematics. Injury to the scapholunate ligament creates symptoms of weak grip strength, pain in extension and non-specific instability symptoms. Complete ruptures eventually culminate in a predictable arthritic SLAC (Scapholunate advanced collapse) pattern. No strong evidence currently supports one treatment in the subacute to chronic setting. In the subacute setting where there is a complete rupture, reducible carpus and insufficient tissue to repair the dorsal ligament, treatment options are limited, and reconstruction should be augmented by a strong graft, to maintain reduced carpal malalignment.

The 3-4 extensor inter-retinacular structural T-shape graft for scapholunate ligament reconstruction is a very reliable low morbidity local graft with excellent structural qualities. The long leg of the T facilitates a fixation point at the centre of rotation of the scapholunate ligament, which contributes to a better anatomical fixation preventing dissociation (opening up) on volar side.

Early results show no morbidity, improved grip strength and improvement of instability symptoms with stable scapho-lunate interval radiologically.

TITLE ONE STAGE FUNCTIONAL RECONSTRUCTION OF THE APERT HAND

Author(s) **Roger Nicholson**

A technique of one stage functional reconstruction of the the hand in Apert syndrome is presented. This limits the total number of hand procedures to 2, decreasing the number of operative procedures that children's with Aperts require. The procedure and timing is discussed.

TITLE THE CASTING MOTION TO MOBILISE STIFFNESS TECHNIQUE FOR REHABILITATION AFTER A CRUSH AND DEGLOVING INJURY OF THE HAND

Author(s) **Robyn Midgley**

Introduction:

- This case report describes the use of the 'casting motion to mobilise stiffness' (CMMS) technique in the management of a crush and degloving injury of the hand. The patient was unable to attend multiple hand therapy sessions due to geographical constraints. The CMMS technique involved the application of a non-removable Plaster of Paris cast that selectively immobilises proximal joints in an ideal position while constraining distal joints in order to direct desired motion over a long period of time. This uses active motion only. Tradit'onal hand therapy techniques or modalities are not used. This treatment approach was beneficial to the patient as a minimum of two appointments per month were needed to regain functional hand use

Purpose of the study:

- To document the use of the CMMS technique as an effective treatment approach in the management of a crush and degloving injury of the hand.

Methods:

- The CMMS technique was applied to the patient's left (non-dominant) hand eight weeks post-injury. The technique's aim was to improve the 30° flexion deformity of the left wrist and flexion contractures of the index, middle and ring fingers with a total active motion of zero degrees. Orthotic devices and traditional therapy were applied once joint stiffness was resolved and a normal pattern of motion was reinstated.

Results:

- At six months, substantial improvement was noted in wrist, metacarpophalangeal and interphalangeal joints. Total active motion exceeded 170° in all fingers, resulting in an excellent functional outcome, measured with the upper limb functional index short form-10 (ULFI-10). The ULFI increased from 0-55% of preinjury status (or capacity) over the 18 months of therapy.

Discussion:

- Brief immobilisation through casting causes certain functional losses but these are temporary and reversible.

Conclusion:

- Finger stiffness, oedema and tissue fibrosis were successfully managed with the CMMS technique without the need for attendance at multiple hand therapy sessions.

TITLE VOLKMANN ISCHAEMIC CONTRACTURE (CASE REPORTS)

Author(s) **Dr Omondi Afulo, Dr Philemon Oduor**

The authors describe two cases of severe volkmann's ischaemic contracture.

The first case is a forty year old male who developed severe volkmann's ischaemic contracture due to neglect by the medical workers despite the patient's persistent complaint.

The second case is a 10 year old boy who presented with a history of fall and sustained injury to his elbow. He wcs attended to at a local health facility where he was put on a complete plaster of paris and given oral analgesics and allowed home. The patient started experiencing pain and swelling and went back to the health facility The parents were reassured and more analgesics given. At day 3 when the pain got worse, the patient wasd taken to a higher level health facility wher a diagnosis of compartment syndrome was made. The plaster was removed and the forearm was found to have extensive blisters. The patient ended up having below elbow amputation. This case also incriminates negligent medical workers.

TITLE SCAPHOLUNATE LIGAMENT RECONSTRUCTION USING THE ARTHREX MINI TIGHTROPE® - PRELIMINARY FOLLOW UP OF THE FIRST CASES

Author(s) **P Jordaan, M Solomons, D McGuire, S Carter**

Multiple techniques exist for the reconstruction of scapholunate ligament injuries. Our unit has previously presented the technique of using the Arthrex Mini Tightrope® for scapholunate ligament reconstructions. We performed a retrospective review and will be presenting the short to medium term follow up of the patients who had this procedure performed, including range of motion, grip strength, radiographic follow and quick DASH and PRWE scores.

Prizes and Awards

SASSH REGISTRAR PRIZE: R3 500.00

This award is available for the best paper read at the SASSH Congress by a registrar or junior consultant (i.e. within one year after qualification and/or registration).

SASSH THERAPIST PRIZE: R2 500.00

This prize is sponsored by SASSH and is presented for the best paper read at the SASSH Congress by a hand therapist (physio- or occupational therapist)

ISIDORE KAPLAN LITERARY AWARD: R10 000.00

This prize is sponsored by SASSH for the best publication by a registrar or consultant between 1 January and 31 December of the previous year.

STRATMED PRIZE FOR THE BEST RESEARCH PAPER STRATMED www.stratmed.co.za

This prize is sponsored by STRATMED and awarded annually for the best research paper presented at the SASSH Congress.

The prize is open to all categories of currently paid-up members of SASSH. The value of this award includes the cost of all flights, accommodation and registration fees to the following year's FESSH (Federation of European Societies for Surgery of the Hand) Congress.

ORTHO-XACT BARRY O'KELLY MEMORIAL PRIZE Macromed

This prize is sponsored by MACROMED and awarded annually for the best original content paper presented at the SASSH Congress.

The prize is open to all categories of currently paid-up members of SASSH. The value of this award includes the cost of all flights, accommodation and registration fees to the following year's FESSH (Federation of European Societies for Surgery of the Hand) meeting.

AFFORDABLE MEDICAL ANNUAL AWARD: R21 000.00

This grant is sponsored by AFFORDABLE MEDICAL and awarded annually to a member of SASSH for accessing hand surgery expertise.

SASSH TRAVELING FELLOWSHIP IN HAND SURGERY: R20 000.00

A Travelling Fellowship has been created to enable a Senior Registrar/Junior Consultant to travel overseas to visit one or more centres of excellence in Hand Surgery.

ASSH BUNNELL TRAVELING FELLOWSHIP

The ASSH Bunnell Travelling Fellowship is awarded annually to any member of SASSH at registrar level. This will allow for complimentary registration to the annual ASSH meeting as well as visits to local hand centres.

Notes

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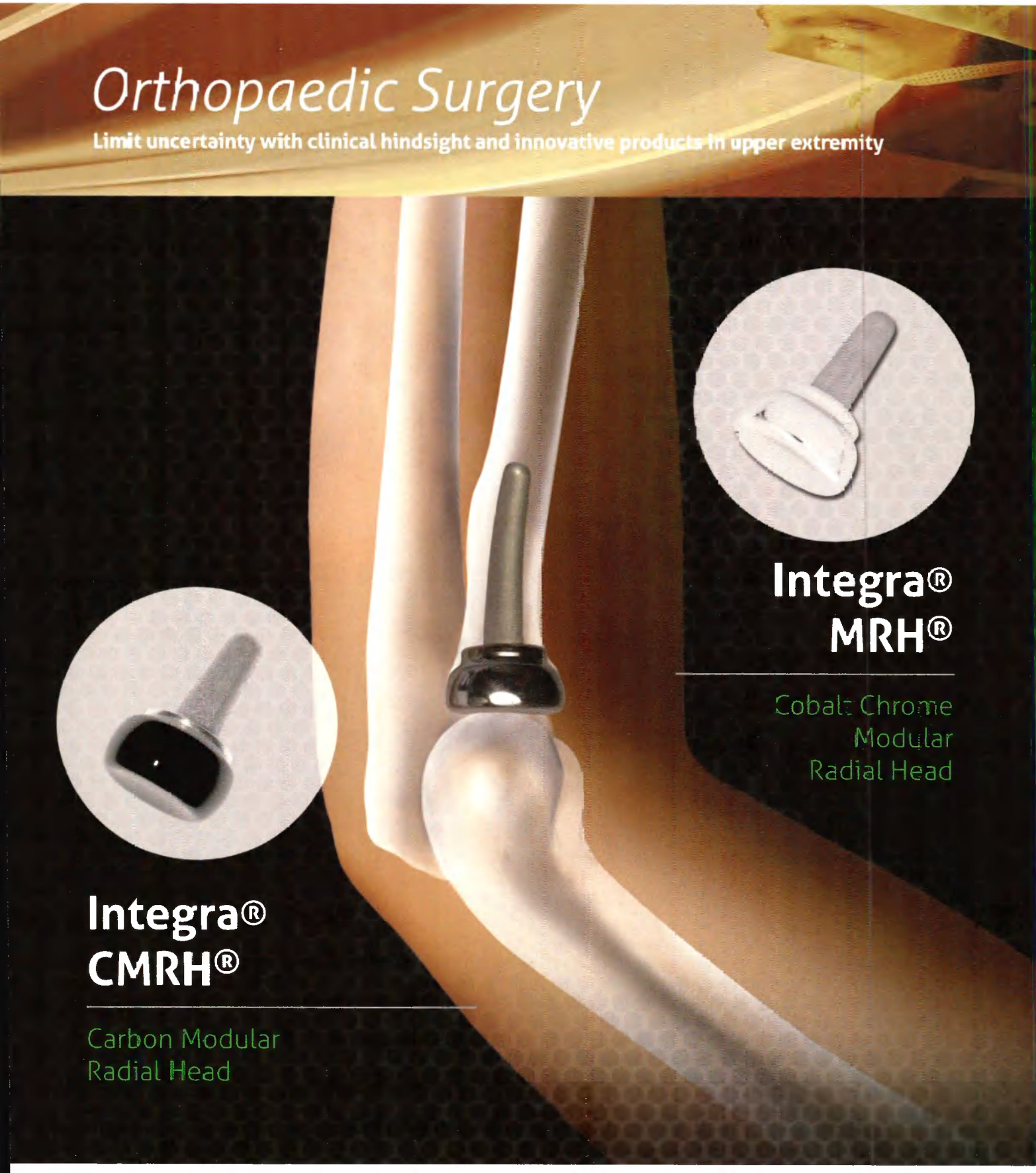

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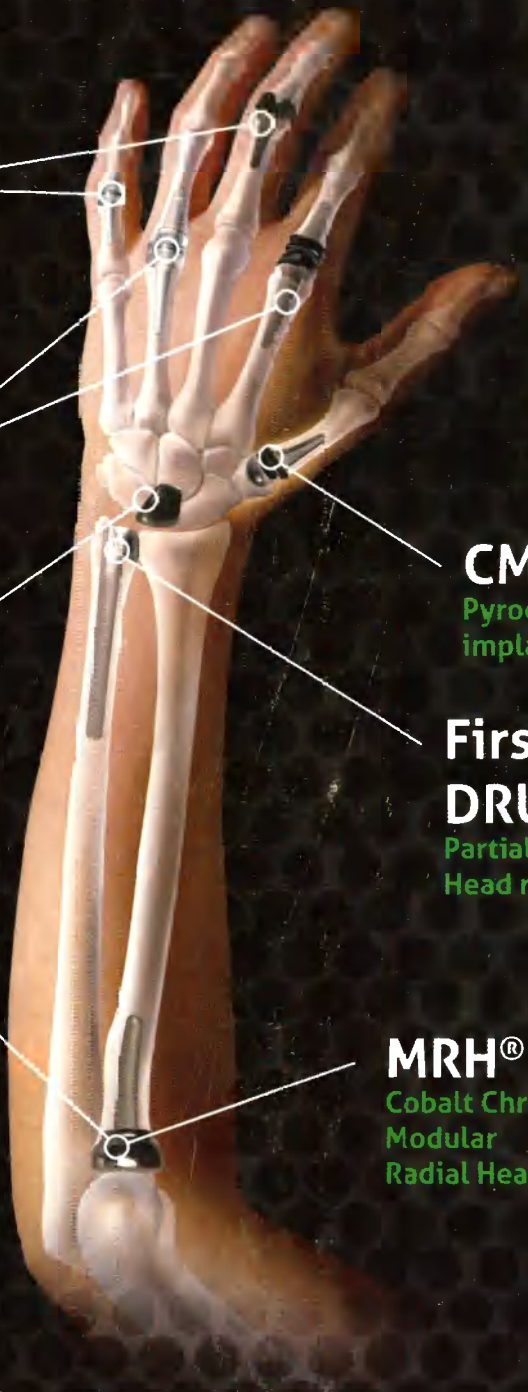

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info@surgitech.co.za
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