



Issue No. 57 - June 2013

# SICOT

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## In Memoriam

**Lamberto Perugia**  
**1927-2013**



SICOT lost a loyal friend and colleague this year with the death of Lamberto Perugia. He was the Italian National Delegate of SICOT from 1986 to 1993 and on the Editorial Board of *International Orthopaedics* from 1993 to 2005.

Born in Rome in 1927, he had to move to Avezzano with the family in 1943 to escape the Nazi/fascist racial laws but returned to Rome with the Allies and worked for the British Institute for a year before returning to his studies and joining the Faculty of Medicine in the University of Rome, La Sapienza. He graduated in 1951 specialising in orthopaedics to become the Director of the Instituto di Clinica Ortopedia at La Sapienza from 1979 to 1983 and again from 1986 to 1989.

He was President of SOTIMI, the orthopaedic society of Southern Italy, from 1974 to 1975; President of the Italian Orthopaedic and Traumatology Society from 1989 to 1990; founding member and first President of the Italian Society of Sports Traumatology, SITRAS, from 1981 to 1982 and later elected Honorary President. He was founder and first President of the Society of Shoulder and Elbow Surgery, SICSeG and Director of the Italian Federation of Sports Medicine, FMSI, and Vice-President from 1988 to 1996.

Internationally, he was well known both in SICOT and also as a founding member of the International Society of the Knee (ISK) in Rome in 1977. He became Vice President of the ISK in 1985 and President in 1987 when the Society enjoyed a memorable meeting in Rome. He was also an honorary member of ISAKOS and Italian delegate of the orthopaedic department of the *Union Européenne des Médecins Spécialistes* and Member of the *Federazione Italiana Giuoco Calcio* from 1957 to be elected President in 1974. He was also on the Medical Commission of UEFA.

In addition to his association with *International Orthopaedics*, he was editor of the *Italian Journal of Sports Traumatology* from 1981 to 1993 and director of the *Italian Journal of Orthopaedics and Traumatology* from 1993 to 1999.

Thus, it can be seen that whilst mourning his passing we should also be celebrating his enormous contribution to Orthopaedics and Traumatology at home and internationally. His stature was recognised by his university, the University of Rome, La Sapienza, which conferred an emeritus professorship on him in 2003. Older members of the Editorial Board of *International Orthopaedics* will remember him as a gentle, kind and wise colleague whose opinion was much valued. They will also remember the wonderful Editorial Board Meeting that he hosted in Rome in 1998.

Our condolences go to his wife Anna and son Dario who is also a referee for the journal.

## Editorial



### **34th SICOT Orthopaedic World Congress Hyderabad, India - 17-19 October 2013**

**An event not to be missed - "Must go, must participate"**

***Ashok Johari***  
*Congress President*

What does a surgeon desire from a congress? Great academics, great faculty, cutting-edge technology, camaraderie, collaborations, relaxing social events and fantastic tourism. The Hyderabad OWC 2013 has it all aplenty and hence is an event not to be missed.

Experts from different subspecialties in Orthopaedics from all over the globe will converge to Hyderabad between 16 and 19 October. Symposia, instructional courses, debates and case discussions will cover various frontier areas of Orthopaedics and Traumatology. An intense learning process had been set up covering 10 halls, 4 plenary lectures, 47 symposia and instructional courses, 46 free paper sessions, one best paper session, 11 focused oral communication sessions and a myriad of electronic posters.

Hyderabad OWC 2013 has the highest number of abstract submissions ever, breaking the earlier record set by the Dubai OWC 2012. 2,047 abstracts have been selected for presentation in various forms. Undoubtedly, this will provide a very wide coverage of Orthopaedics. While frontier areas in Trauma, Spine, Hip, Knee, Ankle and Foot, Upper Extremity, Arthroscopy and Sports Medicine, Paediatrics, Oncology, Basic Research and Education are being covered, topics relevant to the developing world are being highlighted through various symposia.

Academic organisations such as AAOS, APOA, ARTOF, ASAMI, European Bone & Joint Infection Society, IFPOS, SIROT, SOFCOT, and WOC will add lustre to the proceedings. Lunch symposia will provide a glance of the industry viewpoint further exemplified in the huge trade exhibition. The Educational Day on 16 October focuses on Trauma and boasts a coverage of more than 40 areas by an eminent international faculty. Besides all this, invisible seepage and exchange of knowledge will take place through individual interaction during the various breaks and social events.

Numerous social events are planned. A spectacular inauguration will have a touch of Indian culture and arts. The welcome reception and the Indian theme dinner will provide much needed relaxation after intense academics. A cricket match in the spirit of the Indies and a charity run are all added in for fun and social causes.

Nations of the Asia Pacific Orthopaedic Association and SAARC member countries are 'Friendship Nations' and I am sure the OWC will witness a lot of delegates from these countries.

India is a great tourist destination and Hyderabad has been ranked as one of the 10 best cities in the world. Its airport is the world's best ranking airport in the 5 to 15 million capacity and connects with many international destinations. A treasure of sightseeing and shopping awaits those so inclined. From Hyderabad one can travel north or south, east or west, for seeing incredible India.

I welcome each of you personally and promise you a great Congress. We will deem it an honour if you came. I am sure that the Hyderabad OWC 2013 will fulfill the cherished mission of SICOT which is to advance Orthopaedics, promote international education and research and camaraderie between orthopaedic colleagues from different parts of the world.

You will come, won't you?

## SICOT Events

### 34th SICOT Orthopaedic World Congress (Hyderabad OWC 2013) 17-19 October 2013 \* Hyderabad, India

- **Registration**

Online congress registration is open [here!](#) **Early registration deadline is 30 June 2013!**

- **Scientific Programme**

With the experience of two successful events we are pleased to announce the **3rd SICOT Educational Day** in Hyderabad, India, to be held on 16 October 2013. The theme for this year is 'Trauma'. We have invited expert Faculty from over 10 countries for lecturing on the course. [Read more...](#)

- **Social Programme**

Don't miss the entertaining social programme and the chance to experience the rich culture of India. [Read more...](#)

- **Accommodation & Tours**

Hotel booking for SICOT 2013 participants at Hyderabad is on! We have secured attractive discounted rates for a number of rooms in different categories of hotels close to the Hyderabad International Convention Centre. Shuttle transportation will be provided between the Congress venue and the official hotels at fixed times in the morning and evening for only those delegates who have booked through the official website: [Online Hotel Accommodation Booking](#)

- **Exhibition & Sponsorship**

Don't miss out on this unique opportunity to promote your products and services to leading international orthopaedic surgeons, traumatologists and specialists in related fields. [Read more...](#)

## SICOT News

- **OrthoEvidence & SICOT**



repository includes over 1,500 subspecialties, with over 100 new reports added monthly. The reports are available to a member base of over 12,000 physicians and members of associations. Please join the OrthoEvidence interactive community and find out what is new in orthopaedics. Log in to the SICOT Members' Area to find out how you can sign up to [www.myorthovidence.com](http://www.myorthovidence.com) for free.

We are pleased to announce the exclusive partnership of [OrthoEvidence](#) with SICOT. As a valued partner, SICOT members will have FREE access to the site for one year! The site is a great resource of evidence summaries for the latest highest quality research within orthopaedics. OrthoEvidence's summary reports stemming from 60 leading journals, representing all subspecialties, with over 100 new reports added monthly. The reports are available to a member base of over 12,000 physicians and members of associations. Please join the OrthoEvidence interactive community and find out what is new in orthopaedics. Log in to the SICOT Members' Area to find out how you can sign up to [www.myorthovidence.com](http://www.myorthovidence.com) for free.

- **Wisepress.com & SICOT**



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## **Meetings by SICOT Members**

- **Singapore Foot & Ankle Arthroscopy & Reconstruction Cadaveric Workshop 2013**

The Department of Orthopaedic Surgery of the Tan Tock Seng Hospital in Singapore is hosting a Foot & Ankle Arthroscopy & Reconstruction Cadaveric Workshop from 18 to 20 September 2013. The course is the first of its kind in the region and promises to be a very useful educational opportunity. [Read more...](#)



## The Nigerian Orthopaedic Association meeting in Ile-Ife, Nigeria

**Hatem Said**

*SICOT Editorial Secretary - Assiut, Egypt*

I was pleased to receive an invitation to lecture at the [Nigerian Orthopaedic Association](#) meeting in Ile-Ife in November 2012. The trip to Nigeria started several weeks before with the immunization injections for meningitis, cholera and yellow fever. The yellow fever vaccine must be taken ten days before you go. In addition to the weekly tablet for malarial prophylaxis which starts two weeks before and continues four weeks after.

After a six-hour direct flight from Cairo to Lagos, I was picked up by my friend and ex-Assiut fellow Dr Orimolade. We took a bus to Ile-Ife, which is about 240 km away, but the trip took around four hours. Besides the bumps and hurdles that forces a driving pattern reminding you of the Mario driving game, there were accidents on the road side every 10 minutes to remind you of the excitement that you might face...



*Hatem Said with the organisers of the NOA meeting and Dr Nagare*

We arrived at night time to the campus of Obafemi Awolowo University. Their definition of a campus is different from what we are used to, in which this is a small town, with large distances in between colleges and other facilities, where you may drive five to ten minutes to reach another site. It's a huge place! One interesting thing were the thousands of bats flying back to their trees after sunset. We were hosted in the VIP University accommodation with two other international guests from India, Dr Umesh Nagare and Dr Rajesh Parasnis. The generators supplied back-up power for the constantly interrupted power supply, which seems to be the norm.



*The participants of the Arthroscopy workshop*

The following two days included pre-congress activities such as workshops and instructional courses. On the first day, Umesh and myself covered the Arthroplasty side, while Dr Parasnis lectured about Spine. Umesh gave three



to four talks about TKR, while I presented an instructional course on HTO, which included a hands-on workshop with locked plates. The following day, Dr Nagare gave interesting talks about THR, while I presented a course on Basic Knee Arthroscopy, which ended with a hands-on workshop. We were impressed by the eagerness and passion of the participants to learn, despite the power shortages which turned the glass conference halls into a steamy sauna. It was refreshing to eat their cold delicious fruits on returning to the accommodation. We had a welcome reception on the Wednesday evening, where I was pleased to meet Dr Wahab Yinusa and all my Assiut fellows and friends. In total 17 Nigerian fellows have passed through the Assiut/SICOT fellowship programme since 2002.

The meeting attendance was moderate in which I expect around 200 participants were present from the 450 national orthopaedic surgeons. However, it is an annual social and political event for the NOA members.

On Thursday morning, Dr Parasnis gave a talk about Spine Tumours, while Dr Nagare presented on the THR posterior approach. My talk was about TKR in severe varus deformities. At the opening ceremony, after a traditional musical dance, I was asked to deliver a talk about SICOT and its activities, in which I highlighted the contributions of SICOT to the educational process in Africa and the world, and the recent approval of the Education Centre in Lagos. So, after presenting ten talks and two workshops in 2.5 days, we then left for Lagos on another exciting road trip.

On Friday I was escorted by Dr Mustafa Alimi to visit the National Orthopaedic Hospital in Lagos, one of the oldest specialized orthopaedic hospitals in the region. With 250 beds, 15 consultants, and around 50 trainees, the hospital receives around 8,000 patients per year, and performs around 1,000 operations per year. I had a chance to view the location of the new Education Centre with the preparations for the official opening in the near future.

I would like to thank Dr Orimolade, the organizing committee, the NOA, and all my friends who hosted me during this wonderful trip.



*Traditional Dance Troupe*



# SICOT Global Network for Electronic Learning - SIGNEL

## Article of the Month

June 2013

### **Inappropriate requests for magnetic resonance scans of the shoulder**

*Richard Freeman, Sanjay Khanna & David Ricketts*

**Purpose** Magnetic resonance imaging (MRI) scans are a useful investigation for some shoulder pathology. They are costly however and a significant burden on radiology departments. In most cases, clinical examination, plain radiography or ultrasound scan (USS) are sufficient for a diagnosis. There are no current UK guidelines regarding MRI shoulder scan requests.

**Methods** We reviewed 100 consecutive MRI shoulder scan requests and the associated formal reports; other investigations were also assessed.

**Results** Overall, 56% of MRI scans were ordered inappropriately. Shoulder consultants' requests were more appropriate than other groups (70% vs. 38%.  $p=0.04$ ). Excluding shoulder consultants 63% of scans were inappropriately ordered. Shoulder consultants were more likely to order a preceding X-ray (80% vs. 53% respectively,  $p=0.03$ ). Of those with a clinical diagnosis of cuff pathology only 29% had an USS.

**Conclusion** A high percentage of MRI shoulder scans are performed inappropriately. Shoulder consultants are more appropriate in their ordering than other groups. If all groups performed as well 50% less MRI scans would need to be performed.

*International Orthopaedics (SICOT)*

*DOI 10.1007/s00264-013-1968-4*

# SICOT Global Network for Electronic Learning - SIGNAL

## Case of the Month

**June 2013**

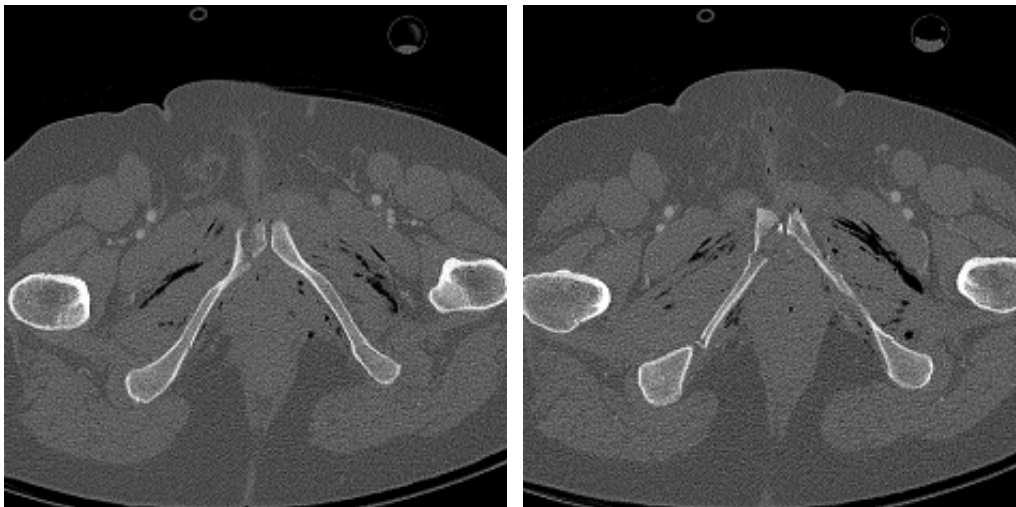
**Author:** Bassel El-Osta - *London, United Kingdom*

A 52-year-old female was involved in a road traffic accident (RTA), motorbike vs car, at a speed of 40 mph. She arrived to our hospital as trauma call. Patient was assessed by the Advanced Trauma Life Support protocol (ATLS).

Primary survey results were the following: Airways- fine and patent, Breathing- spontaneous and equal air entry, Circulation- distended abdomen, obvious pelvic injury, PV bleeding, tib-fib deformity.

A decision was taken to dismiss a secondary survey due to the pelvic injury.

A body CT scan was performed.



Q: What is the primary diagnosis and next plan management?

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[Click here to read more...](#)

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The radiologist consultant report was as follows:

In the pelvis there is an extensive osseous and soft tissue injury. Osseous injuries include fractures of the symphysis pubis bilaterally, the inferior pubic rami bilaterally, the junction of the anterior column of the right acetabulum with the superior pubic ramus, minimally displaced fracture of the middle column of the left acetabulum and small non-displaced fractures of the anterior aspect of the right sacral ala near the sacroiliac joint which are, however, bilaterally intact and not diastased. There is considerable soft tissue injury in the perineum. This appears to be predominantly below the level of the bladder involving the region of the urethra and vagina extending towards the labia. Soft tissue swelling extends into the left rectus muscle superiorly.

Additional soft tissue swelling is present along the medial aspect of the left obturator internus extending posterior to the left side of the rectum. In this region and elsewhere there is extensive perineal, subcutaneous and intramuscular air.

A decision was made to take this patient to theatre and fix the pelvis with external and internal fixation, then address the rest of the injury at a later stage.

The surgeon found it extremely difficult and literally impossible to reduce the pelvic fracture intra-operatively.

Q: Where was the problem and what is the next step?

1. Inexperience surgeon
2. Comminuted fracture of the pubic symphysis
3. Soft tissue stuck
4. Inadequate exposure
5. Any other problem (please think about it)

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[Click here to read more...](#)

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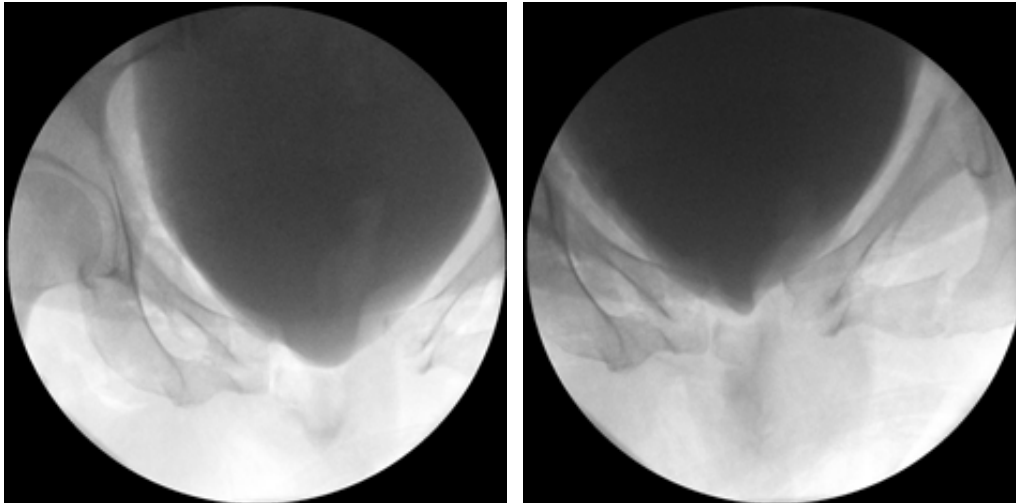
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At that stage, the surgeon decided to call the urologist to ask him for his opinion. They decided to do an operative cystoscopy.

A radiograph was taken.



Where is the problem?

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[Click here to read more...](#)

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The answer to that question was in the urethra and only when they put a suprapubic catheter was the fracture reduced nicely and the final results appeared in the following radiograph:



#### **Discussion:**

Podesta et al conclude that injuries to the female urethra associated with pelvic fracture are uncommon. It has been reported that these injuries can occur in the following circumstances:

- Surgeries of the pelvis or groin (including hernia repair and hysterectomy).
- Tears, cuts, bruises, and other injuries to the urethra (the tube that carries urine out of the body) - most common in men.
- Straddle injuries (direct force that injures the area behind the scrotum).
- Deceleration injuries (for example, a motor vehicle accident that occurs when you have a full bladder and are wearing a seatbelt).

In our case and presentation, we did not have any of the above circumstances, yet we had an urethral injury in a female. It is very difficult in the literature to find out what is the percentage and there has been minimal cases reported.

#### **Conclusion:**

The learning point in this case report is that the surgeon should have recognised the problem earlier, especially since the patient complained of abdominal pain and had vaginal discharge. An early cystoscopy or CT contrast should have been performed before the patient was taken to theatre. Finally, even though the urethra injury is uncommon in pelvic fractures, it is always good to suspect it and eliminate it in any pubic symphysis fracture.

#### **References:**

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- Morey AF, Dugi III DD. Genital and lower urinary tract trauma. In: Wein AJ, ed. *Campbell-Walsh Urology.* 10th ed. Philadelphia, Pa: Saunders Elsevier; 2011:chap 88.
- Runyon MS. Genitourinary system. In: Marx JA, ed. *Rosen's Emergency Medicine: Concepts and Clinical Practice.* 7th ed. Philadelphia, Pa: Mosby Elsevier; 2009:chap 44.

## Training Around the World



### Orthopaedic Training In Saudi Arabia

#### **Mohammed Alshehri**

*National Guard Hospital, Jeddah, Saudi Arabia*

The orthopaedic training in Saudi Arabia is a long and mostly exciting trip. It has some similarities to the orthopaedic training system in North America.



Undergraduate medical training in Saudi Arabia consists of six years in medical school. After this, each medical student needs to spend one year of internship rotating between the four major specialties. During the year of rotating internship, everyone has to pass the entrance exam for training programmes for medical specialties, which is considered as a medical license exam. Once the internship has been successfully completed, the candidate can apply for a residency position in his/her specialty of interest service.

The orthopaedic training programme is a unified programme at the State level and supervised by the Saudi commission for health specialties. It is a joint training between the approved medical centres in each region managed by a local committee.

There are three prerequisites to be eligible for orthopaedic training. The first one is obtaining approval from the workplace to join the training programme in orthopaedic surgery. This is followed by submission of application letter to the Saudi commission for health specialties. Finally, the candidate needs to pass the selection exam. This exam is unified all over the Saudi kingdom and also includes an interview organised by the local committee. Having successfully gone through all the prerequisites, the applicant can start his journey in orthopaedic training, which lasts for five years.

The first year is a mix between orthopaedic and non-orthopaedic specialties. Every trainee has to spend a period of three months in each of the intensive care, general surgery, plastic surgery and orthopaedic surgery units. The aim of training in the first year is to provide residents with basic surgical skills and expose them to surgical subspecialties that an orthopaedic surgeon needs to be familiar with.

The second and third years form multiple "3-month junior residency rotations" in various orthopaedic subspecialties at an approved training centre. The residents act at first on call during these years. They develop confidence in managing diverse emergency situations and are provided with hands-on supervised training in most of the orthopaedic trauma procedures.

In the fourth and fifth years of training, the trainee is addressed as a "senior resident". Aims of senior residency are to expose residents to all the diverse fields of orthopaedic surgery and allow them to participate in major elective orthopaedic procedures.

Annual promotion depends on yearly performance as assessed by the preceptors. In addition, each trainee needs to pass both clinical and written promotion exams that are conducted yearly. Promotion from third year to fourth year involves passing part 1 of the Board examination. Of late, the fourth year of residency training has increasingly involved research commitments in a field of interest of the residents. Advanced Trauma Life Support certification is mandatory for all trainees and this has to be taken once during the five years of training.

In all approved training centres, the trainee has to attend the daily morning meetings. There are fixed academic half days every week for all trainees in each city. These are highly organised with a fixed schedule of lectures, case presentations, and journal club presentations. Individual centres also run their own academic activity each week.

The Saudi orthopaedic training provides excellent hands-on training in trauma. Exposure to other subspecialties is variable and highly depends on the centre and the interests of the preceptors at that centre.

At the end of the fifth year eligible candidates sit for board examinations, which are held at least once per year in one training centre for trainees all over the country. The final examination consists of two parts: the written part and clinical/oral part. Candidates who pass the final examination are granted Saudi Board Certificate in orthopaedic surgery. Most graduate orthopaedic surgeons apply for subspecialty fellowships outside the Kingdom in Europe or North America.

The biggest strength of orthopaedic training in Saudi Arabia is its organisation as a joint programme between approved medical centres in a region. This ensures reasonable exposure of the trainees to different surgeons and various subspecialties. The biggest weakness of the programme is lack of standardisation in the residency programme and higher stress on "service" rather than "education". Surgical hands-on training is highly limited in elective surgeries and teaching of surgical skills to residents is not taken as a responsibility by many consultant surgeons.

Orthopaedic training in Saudi Arabia is evolving and there continues to be a lot of scope for improvement. We need to promote academic leaders who are willing not only to do research, but also highly dedicated to resident training. The newer generation of orthopaedic surgeons is increasingly trained in western countries, and has



brought the latest innovations and technology to the field of orthopaedics in the Saudi Kingdom. The need of the hour is for some basic educational reforms, which will make sure that the training is comparable to the western world, with an eventual aim of building a better system for health and academic services in the Kingdom.

## Fellowship News

### Hiranandani Orthopaedic Medical Education (HOME) Research Fellowship Report



#### **Chintan R. Hegde**

*SICOT Associate Member – Mumbai, India*

While I was pursuing my trauma training at a renowned centre in Mumbai, India, I realized that it was time for me to set my goals right and decide on my specialty in the ever growing field of orthopaedic surgery. As all young aspiring orthopaedic surgeons, I too was attracted towards Arthroplasty surgeries from the beginning of my postgraduate training.

I had heard about Hiranandani Orthopaedic Medical Education (HOME), a research division of the Department of Orthopaedics at the Dr L.H. Hiranandani Hospital in Mumbai, India, through colleagues and through reading about the amount of research work coming out of this department under the supreme leadership of Dr Vijay D. Shetty, a renowned hip and knee surgeon, and a dedicated academic with a great inclination for research. I knew this was the perfect place for me to observe specialised hip and knee surgeries, learn the ins and outs of research and to improve my orthopaedic skills in every aspect.

#### **Clinical Work**

I joined HOME as a Clinical Research Fellow for a period of one year from 1 February 2012 to 1 February 2013, and Dr Vijay D. Shetty was my mentor. He takes a keen interest in nurturing new talent and shows them the right direction for the future. He took me through the basics of research, the quality and type of work being done at this centre. I was handed a crystal clear job format of this one-year fellowship on day one.

Dr Shetty made me in charge of two projects and guided me through each and every step of publishing these projects. Both projects have been accepted and published in an international journal. Another good part of this fellowship is that, apart from active research work, it also involves clinical work including operating as a first assistant.

I got to see both cruciate substituting and cruciate retaining type of knee surgeries, knee arthroscopic surgeries, advanced hip reconstruction surgeries and a variety of trauma cases in this period of one year. I also had the opportunity to be trained in Computer Assisted (Navigation) Knee surgeries.

During my tenure as a fellow, I was actively involved in the first ever IBOM (International Biologic Orthopaedic Meet) held under the guidance of Dr Vijay Shetty in Mumbai, India, in the month of April. We had eminent international and national faculty attending this meeting.



*IBOM team with Dr Shetty*

Then came the SICOT Instructional Course lectures, organised by Dr Shetty and Dr Ashok Johari at the Dr L.H. Hiranandani Hospital. I was actively involved in the organising and scientific committee.

The HOME department also organised the CAD-2012 challenges and debates in complex arthroplasty under the guidance of Dr Sanjeev Jain, a renowned joint replacement surgeon.



*With Dr Sanjeev Jain at CAD-2012*

I had the opportunity to attend the JBJS (British) Indian reviewers' meeting at Chennai, India and to meet editors of this reputed journal. It helped me understand the objectives and functioning of the journal. I also attended two primary total knee replacement workshops during my fellowship.

### ***Publications & Presentations***

I have three papers published and many more projects from HOME submitted to internationally indexed journals:

1. Outcome of subvastus approach in elderly nonobese patients undergoing bilateral simultaneous total knee arthroplasty: A randomized controlled study (2013): Indian Journal of Orthopaedics: 47(1)45-49.
2. Use of bone graft substitute in the treatment for distal fractures in elderly (2012): Eur J Orthop Surg Traumatol DOI 10.1007/s00590-012-1057-1.
3. The "Shetty test" in ankle injuries: validation of a novel test to rule out ankle fractures (2012): Eur J Orthop Surg Traumatol DOI 10.1007/s00590-012-1069-x.

I had the following presentations at national and international meetings during the year:

1. Paper presentation at Asia-Pacific Orthopaedic Association (APOA) Golden Jubilee congress, New Delhi: 4 October 2012 on "Use of bone graft substitute in the treatment for distal radius fractures in elderly".
2. Poster presentation at Asia-Pacific Orthopaedic Association (APOA) Golden Jubilee congress, New Delhi: 3-6 October 2012 on "The Shetty test in ankle injuries: validation of a novel test to rule out ankle fractures".
3. Paper presentation at Combined 33rd SICOT & 17th PAOA Orthopaedic World Conference, Dubai, United Arab Emirates: 28-30 November 2012 on "Plantar fasciitis: a prospective comparative study to compare the efficacy of corticosteroid therapy with platelet-rich plasma therapy".
4. Poster presentation at Combined 33rd SICOT & 17th PAOA Orthopaedic World Conference, Dubai, United Arab Emirates: 28-30 November 2012 on "Use of bone graft substitute in the treatment for distal radius fractures in elderly".
5. Poster presentation at Combined 33rd SICOT & 17th PAOA Orthopaedic World Conference, Dubai, United Arab Emirates: 28-30 November 2012 on "The Shetty test in ankle injuries: validation of a novel test to rule out ankle fractures".

### ***Outside Clinical Work, Travelling & Recreation***

I also had an opportunity to accompany Dr Vijay Shetty to the Mahe Islands, Seychelles, for a knee replacement mission in the month of August, where we successfully performed 28 total knee replacements in three and a half days, which is a record by itself and was well appreciated by the Seychelles government. During our one-week stay at the Seychelles, we engaged ourselves into some adventure activities too, such as deep-sea diving. This truly was my best experience until now and I sincerely thank Dr Shetty for giving me this opportunity of a lifetime.



*Dr Shetty and me with the Vice-President of the Seychelles*



*All ready for our first dive*

I also had the chance to travel to Dubai, United Arab Emirates, for the Combined 33rd SICOT & 17th PAAO Orthopaedic World Conference to present my work on an international stage. I also travelled to many places in India to present our work at various international and national meetings held here during the last year.

I wholeheartedly thank my guide, Dr Vijay Shetty, who, apart from being a highly competent surgeon, is also extremely considerate and helpful. He is a very good teacher and an excellent guide. I sincerely thank him and Dr Sanjeev Jain for being such great hosts. The experience and knowledge I have gained from this fellowship has changed my outlook towards orthopaedic practice and research in particular. I strongly recommend this fellowship to all young surgeons who wish to learn and make an active contribution to orthopaedic research.

I was awarded the Clinical Research Fellowship in Advanced Hip & Knee Surgery on 31 January 2013 by the Department of Orthopaedics at HOME.



*Dr Y. Gawai, Dr Sanjeev Jain and Dr Vijay Shetty awarding me the certificate of the HOME fellowship*



## History of Orthopaedics



### A very brief history of orthopaedic surgery in United Kingdom

#### **Alistair Ross**

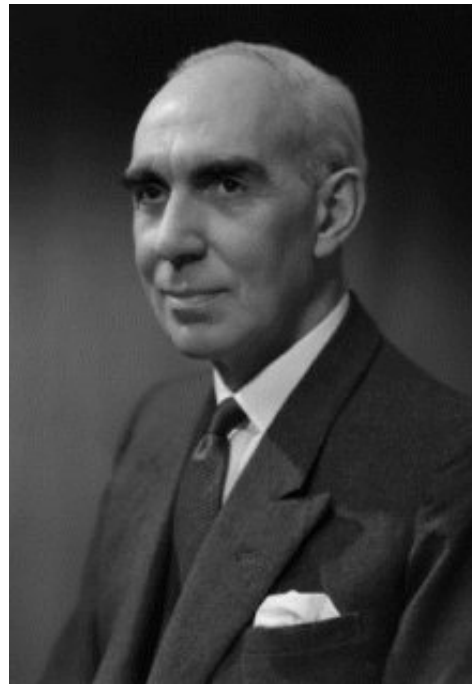
*Consultant Orthopaedic Surgeon - Bath, United Kingdom*

It is impossible, in a short article, to acknowledge the contribution of the United Kingdom to world orthopaedics. All one can do is to focus attention on some of the major advances and recognise the surgeons, and others, who made them.

One starts with Hugh Owen Thomas (1834-1891), long considered the father of orthopaedic surgery in Britain. The son of a bone setter in Liverpool, he trained as a doctor in Edinburgh and at University College Hospital, London before returning to Liverpool where he treated fractures and tuberculosis, in particular. He is best remembered for the Thomas splint, notably used by his nephew, Sir Robert Jones (1857-1933), in the First World War to reduce the mortality of femoral fractures, and for Thomas's test for fixed flexion of the hip. Jones himself studied with his uncle before eventually becoming Surgeon Superintendent of the Manchester Ship Canal. He established the first accident service in the world to treat the injured workers, experience which stood him in good stead when he organised the system of military hospitals and became Inspector of Military Orthopaedics (1916). By this time, he and Alfred Tubby had also organised a group of surgeons into the British Orthopaedic Society (1894) and subsequently, in 1918, he was one of a small group of surgeons who founded the British Orthopaedic Association. The Shropshire Orthopaedic Hospital, in Oswestry, was renamed the Robert Jones and Agnes Hunt Orthopaedic Hospital in 1933.



*Robert Jones*



*Reginald Watson-Jones*

One of Robert Jones' *protégés* was Reginald (later Sir Reginald) Watson-Jones (1902-1972). After graduating from the University of Liverpool, he trained in London then returned to Liverpool as the honorary assistant surgeon in charge of the orthopaedic department and fracture clinic at the Royal Infirmary. Later, he too was appointed to the staff of the Shropshire Orthopaedic Hospital. He instituted an instructional course on fractures at the Liverpool Royal infirmary which became so popular that he was encouraged to write the first edition of his "Fractures and Joint Injuries". This was so successful that it ran to 15 editions under his authorship before being taken over, after his death, by JN (Ginger) Wilson under whose editorship it ran for a further seven editions. Watson-Jones adopted some of the European practices of internal fixation of the long bones but always believed these to be an "internal suture" which he supplemented externally with plaster of Paris. He never wholeheartedly adopted the principles of the Swiss school. He was appointed civilian consultant in orthopaedic surgery to the Royal Air Force in the early 1940s and towards the end of the war became director of the Orthopaedic and Accident department at the London Hospital in Whitechapel. One of his greatest achievements was the establishment, in 1948, of the British volume of the Journal of Bone and Joint Surgery which ran successfully in association with the American volume until last year when the two volumes became separate. In his obituary, Jackson Burrows wrote that his writing "had not only the essential virtues of clarity, simplicity, precision and brevity, but displayed also a splendid style of his own, always recognisable, exciting, stimulating and persuasive", a style the Journal has tried to maintain. In addition to this he was, at various times, President of the British Orthopaedic Association, Vice President of the Royal College of Surgeons of England and Orthopaedic Surgeon to King George VI and Queen Elizabeth, the latter the former Patron of the BOA.

The 1960s saw remarkable advances in the treatment of end-stage joint disease. At the forefront of these were John Charnley, later Prof Sir John (1911-1982), with his technician Harry Craven, but not to be forgotten for their place in the development of total hip replacement were Ken McKee of Norwich and Peter Ring of Redhill. Charnley



worked on, and eventually perfected, the low friction arthroplasty with a stainless steel on high molecular weight polyethylene bearing, while McKee used a modification of the Thompson hemiarthroplasty combined initially with a metal cup designed by Watson Farrar and latterly a polyethylene cup designed by George Arden. Ring, meanwhile, distrusting polymethylmethacrylate cement, developed one of the earliest uncemented hip replacements based on the Austin Moore stem and a metal cup characterised by a long screw which fitted along the internal brim of the pelvis reaching almost to the sacroiliac joint. The Stanmore hip prosthesis was devised by John Scales, who was also responsible for the design of the massive endoprosthetic replacements which continue to be used in the treatment of bone sarcomas and other causes of major bone loss. It is probably fair to say that this early work laid the foundation for all subsequent joint replacement worldwide.

I have, during the course of this article, omitted the names of dozens of other great British orthopaedic surgeons who continue to enhance the contemporary international literature. Where would orthopaedic surgery have been without Bankart, Platt, Girdlestone, Trueta, Seddon and numerous others? Neither should we forget the contribution of Lister for his work on asepsis and Fleming, Florey and Chain for their identification and synthesis of penicillin, without whose discoveries much of modern orthopaedics would be substantially more hazardous, nor, indeed, those of Hounsfield (CT) and Mansfield (MRI), both winners of the Nobel Prize for their contribution to modern methods of axial imaging.

British orthopaedics has, at various stages in its evolution, led the world in the development of new ideas and new techniques. As in other disciplines, these have been adapted and improved upon, often to the financial advantage of others, but those who were brave enough to have faith in their original concepts should not be forgotten, particularly by those who have adopted their ideas with minor revision and added their name to them.

## Worldwide News

### The value of the three-point index in predicting redisplacement of diaphyseal fractures of the forearm in children

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#### Abstract

**Introduction:** Redisplacement is the most common complication of immobilisation in a cast for the treatment of diaphyseal fractures of the forearm in children. We have previously shown that the three-point index (TPI) can accurately predict redisplacement of fractures of the distal radius. In this prospective study we applied this index to assessment of diaphyseal fractures of the forearm in children and compared it with other cast-related indices that might predict redisplacement.

**Methods:** A total of 76 children were included. Their ages, initial displacement, quality of reduction, site and level of the fractures and quality of the casting according to the TPI, Canterbury index and padding index were analysed. Logistic regression analysis was used to investigate risk factors for redisplacement.

**Results:** A total of 18 fractures (24%) redisplaced in the cast. A TPI value of  $> 0.8$  was the only significant risk factor for redisplacement (odds ratio 238.5 (95% confidence interval 7.063 to 8054.86);  $p < 0.001$ ).

**Summary:** The TPI was far superior to other radiological indices, with a sensitivity of 84% and a specificity of 97% in successfully predicting redisplacement. We recommend it for routine use in the management of these fractures in children.

#### Research Analysis

**Primary research question:** To test the hypothesis that the (Three-Point Index) TPI can be successfully modified to assess the reduction of forearm fractures in children and its success rate in predicting redisplacement can approach that in the distal radius.

**Methodology:** Prospective case series.

**Study population:** 84 consecutive children aged  $< 15$  years with fractures of the forearm, 76 were considered eligible for conservative treatment and were included. Exclusion criteria included an unsatisfactory reduction (four patients), open fractures (three) and floating elbow (one). None of the fractures included in the study had an associated neurovascular injury. There were no bilateral fractures.

**Outcome measurement:** Radiographic measurements were made and acceptable initial reduction angulation was  $< 25^\circ$  in children aged  $< 4$  years,  $< 15^\circ$  in those between 4 and 9 years and  $< 10^\circ$  in those aged  $\geq 10$  years, considering the remodelling potential due to years of growth remaining. All radiological measurements were made on anteroposterior and lateral radiographs by three authors (SI, KBA, FS) using Image J 1.42q (National Institutes of Health, Bethesda, Maryland) with  $0.5^\circ$  or 0.1 mm accuracy. At weekly follow-up visits, redisplacement was defined as further angulation of  $> 10^\circ$  in any direction.

**Statistical analysis:** Chi-squared test was used to compare the dichotomous variables between redisplaced and non-redisplaced fractures. The Mann-Whitney U test was used to evaluate the significance of the difference of the means between the independent groups. Multivariate logistic regression analysis was performed to determine the effect of possible risk factors on redisplacement when they were present together. Thus, on the basis of univariate analysis, any variable significantly related with fall occurrence and those with a result of  $p < 0.25$  were drawn into the analysis. SPSS v11.5 for Windows (SPSS Inc., Chicago, Illinois) was used for statistical analysis, and  $p$ -values  $< 0.05$  were considered significant.

**Results:** In 71 fractures (93%) the TPI predicted correctly whether there would be redisplacement, with a sensitivity of 84%, specificity of 97%, positive predictive value of 89% and negative predictive value of 95%.

#### Comment by Shalin Maheshwari

Most paediatric diaphyseal fractures of the forearm are treated by manipulative reduction. The factors leading to redisplacement can be related to the fracture or the surgeon. Unlike fractures of the distal radius, radiological indices have not aroused interest in diaphyseal fractures of the forearm, aside from one study by Bhatia et al

(2006) where a retrospective/prospective study was conducted, in which the review of case records and radiographs of forearm and distal radius/ulna fractures were included. In this study, distal radius fractures were included for the first time and even though all indices were higher in the group that showed displacement, there was no subgroup analysis, which means that the forearm fractures were not differentiated from the distal radius fractures, thus acting as a possible confounder.

The **Padding index** is the proportion of the dorsal gap (measured between the cast and the skin) to the largest interosseous distance between the radius and the ulna. The **Cast index** is the ratio of inner cast diameter at the fracture site on lateral and anteroposterior view. It proposes that the sectional geometry of the cast should be elliptical rather than circular in the distal forearm. Although later attempts were made to adapt the cast index to forearm fractures, the sectional geometry of the rest of the forearm is not as elliptical as at the wrist, and hence this index is not suitable for predicting redisplacement throughout the forearm. The **Canterbury index** combines the padding index and the cast index. **Three-point index** differs from the other indices because it not only takes into account the gaps at the fracture site, it also uses the gaps proximal and distal to the fracture sites, which are important points to maintain reduction against common displacement forces.

In previous studies of pediatric distal radius fractures where these indices were used: Alemdaroğlu KB et al (2008) have shown that the limitation of these indices is that they are based on measurements of the gap at the fracture site alone and ignore proximal and distal cast fixation. Marcheix et al (2011) found poor moulding of the cast, as measured by the TPI, to be the only important risk factor for redisplacement and again found the TPI to reflect the quality of application of the cast and to be an excellent predictor of redisplacement. Hang et al (2011) concluded that a high TPI was the most significant risk factor for redisplacement, and Devalia et al (2011) reported that the TPI and the quality of reduction were the most significant indicators of redisplacement, recommending its use when judging the technique of moulding the cast.

This is the first report on the use of a modified TPI for the assessment of reduction of diaphyseal fractures of the forearm. The authors have compared all the above-mentioned indices with TPI and have found TPI to have higher sensitivity, specificity, positive predictive value and negative predictive value with acceptable interobserver reliability and intra-observer reliability. The authors were however not involved in the cast application but only in the assessment of the fractures on follow-up. They found a greater tendency for redisplacement of fractures in children aged < seven years which was attributed to difficulty in maintaining the reduction when casting a small forearm.

Paediatric forearm fractures is a very complex subject to be explained by a single factor. In my experience complete initial displacement of the fracture, anatomical reduction and obliquity of the fracture line seem to be the important risk factors for re-displacement. I feel that the casting indices should not be interpreted as a separate issue but in conjunction with fracture characteristics and patients factors. The three-point index has proven to be the superior of all these indices in paediatric distal radius fractures and now also seems promising in paediatric forearm fractures by this study.

Overall it is a good study and I would like to implement TPI assessment in paediatric forearm fractures in my routine practice. However, these results should be collaborated by further larger, multicentric, RCT's to recommend it strongly as a protocol in radiological assessment of these forearm fractures under treatment and serve as a prognostic value for redisplacement.

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