In Memoriam
- Hussein Abdel Fattah

Editorial by Kandiah Raveendran
- A Visit to the Oman SICOT Education Centre

SICOT Events
- XXVI SICOT Triennial World Congress combined with 46th SBOT Annual Meeting - Rio de Janeiro, Brazil
- 21st SICOT Trainees Meeting

SICOT News
- 20th SICOT Trainees Meeting

SICOT Global Network for Electronic Learning - SIGNEL
- Article of the Month
- Case of the Month

Fellowship News
- "SICOT meets SICOT" Fellowship Report in Homburg
- Clinical Research Fellowship in Shoulder Surgery at The Johns Hopkins University

History of Orthopaedics
- Skeletal Injuries and Orthopaedics in Ancient Egypt

International Meetings & Courses
- The Cambridge Basic Science FRCS (Orth) Course 2014
- The Singapore Basic Science FRCS (Orth) Course 2014
- IOC World Conference on Prevention of Injury & Illness in Sport 2014

Worldwide News
- Efficacy of platelet-rich plasma in the treatment of degenerative knee pathology

Industry News
- Orthofix
In Memoriam

Hussein Abdel Fattah (1927-2014) - Egypt
SICOT National Delegate of Egypt (1982-1990)
SICOT Vice President (1988-1990)

Prof Hussein Abdel Fattah passed away on Wednesday, 22 January this year. Prof Abdel Fattah qualified from the Medical School (Kasr El-Aini) of Cairo University, in 1952. After finishing his residency at Kasr El-Aini, he went on to be a general surgical registrar for two years in the same hospital. After that he joined the orthopaedic department under Prof Abdel Hay el-Sharkawi. He was one of few who obtained his Masters in general and orthopaedic surgery. He was then appointed to the staff of the orthopaedic department, Cairo University, where he was the most active orthopaedic surgeon in the country for decades. He owned a huge library of X-rays for cases he had done, which was admired by all his trainees and visiting professors. Infections of bone and joints was his main concern including T.B. He mastered the conservative treatment of fractures and moved on to operative management after attending an AO course in Davos. He continued to learn new techniques and to follow the orthopaedic literature until the very end. He retired form Cairo University in 1987 and continued to be a visiting professor until 1997.

He was the SICOT National Delegate of Egypt (1982-1990) and was appointed SICOT Vice President (1988-1990).

He will be greatly missed by many generations of orthopaedic surgeons.
Editorial by Kandiah Raveendran - First Vice President of SICOT

A Visit to the Oman SICOT Education Centre

On 18 November 2013, my wife and I landed at Muscat International Airport and were pleasantly surprised by Dr Mohammed Darwish who greeted us before immigration and helped us with the formalities.

Dr Darwish, whom we have known for many years, is the SICOT National Delegate for Oman. He is also the current President of the Oman Orthopaedic Society and the President of the Pan Arab Orthopaedic Association – a very busy man indeed. We were greatly honoured by this special welcome.

We were whisked to our hotel through the bustling streets of Muscat. The capital of the Sultanate of Oman is a modern but still ancient city. It is also a strategic port. Oman has a population of about 3 million people. The Omani have a long historical and cultural heritage and the country has modernized itself in the last 30 years with impressive infrastructure and magnificent architectural iconic buildings like the Grand Mosque and the Royal Opera House.

The next day was the beginning of a busy two-day programme. Dr Mohamad Al Lami, Head of the Orthopaedic Department of Khoula Hospital, greeted me. Dr Al Lami and his department, together with Dr Darwish, have all been instrumental in mooting this SICOT Education Centre in Muscat and in obtaining the necessary approval and support from the Ministry of Health.

The day started with my lecture in the Main Auditorium on ‘Proximal Tibial Osteotomy for Varus Gonarthrosis – Indications and Patient Selection’. This was followed by a brief introduction about SICOT and the Education Centre’s vision and objectives.

I then toured Khoula Hospital, the National Trauma Centre that has 500 beds. The hospital is a referral centre for Orthopaedic Surgery, Neurosurgery, Plastic Surgery and Burns including Rehabilitation. It is completely paperless and is fully equipped with the latest imaging and diagnostic tools.

After the obligatory tour of the Education Centre, Dr Al Lami took me to the office of the Director General of Khoula Hospital, Dr Ali Al Mashani, who has been very supportive of the SICOT Education Centre. I suggested that since Khoula Trauma Hospital has excellent facilities for patient care, teaching and research they should try to host fellows from other less developed countries.

Dr Al Lami and his department consultants and doctors then hosted my wife and I to a sumptuous lunch at one of the premier hotels in Muscat.

The next day started off with a talk by Dr Al Lami about the achievements and vision of the Orthopaedic Department of Khoula Hospital. There are nine consultants in the Department with specialists and residents in the subspecialities of joint replacement, spine surgery, complex fractures, sports medicine, oncology, paediatric orthopaedics and reconstructive surgery. They have very high standards and 86% of all trauma patients requiring surgery are operated on in the first 24 hours.

Later, one of the senior residents, Dr Reem Bahwan, updated us on the structure and training goals of the OMSB Orthopaedic Programme. The residency programme is relatively new and first started in 2011 with a five-year residency programme leading to a board examination.
The Oman SICOT Education Centre under the dynamic leadership of Dr Al Lami has planned for a SICOT Trainees Meeting in 2014, a selection of fellows to be sent overseas and to receive fellows to be attached at Khoula. The SICOT Oman Education Centre has fulfilled its role and I am sure that it will grow to become a centre of excellence in the region.
Call for Abstracts

Abstract submission is open here! Deadline: 27 March 2014

Registration

Congress registration is open here for all participants not residing in Brazil. Participants residing in Brazil should register here.

Diploma Examination

Registration for the 12th SICOT Diploma Examination is now open. Read more...

Registration and application deadline: 24 March 2014

Awards

Click here to find out more about the awards which are granted to young surgeons to help them attend the Congress.

Accommodation & Tours

Don't miss out on exclusive hotel and tour offers in Rio de Janeiro! Click here for more information.

Exhibition & Sponsorship

Don't miss this unique opportunity to promote your products and services to leading international orthopaedic surgeons, traumatologists and specialists in related fields. Read more...
21st SICOT Trainees Meeting
1-2 June 2014 * London, United Kingdom

Call for Abstracts
Abstract submission is now open here! Deadline: 16 February 2014

Awards
SICOT Trainee Prizes for Best Oral Presentations will be awarded toward travel expenses to attend the next SICOT Orthopaedic World Congress in Rio de Janeiro, as follows:
1st Prize: £1000
2nd Prize: £600
3rd Prize: £400
20th SICOT Trainees Meeting

Maher Halawa
SICOT National Delegate of Egypt - Cairo, Egypt

The 20th SICOT Trainees Meeting was held within the activity of the Egyptian Orthopaedic Association (EOA) meeting in Cairo, Egypt, on 16 December 2013. The EOA offered to host the SICOT Trainees Meeting on a yearly basis for the last 3 years.

It was a successful day, well-attended by both trainees and consultant staff. Prof Ashok Johari from India (Chairman of the SICOT Education Committee) was present, as well as Prof Werner Knopp from Germany and consultants from Sudan.

The scientific meeting comprised 15 papers by trainees and four lectures by Hatem Said, Khaled Emara, Ahmed Abdel Azeem and Maher Halawa.

Hatem Said spoke about "Developing a career in orthopaedics" and he explained to the audience the stages of an orthopaedic surgery career from general to subspecialty. He went on to describe how to establish private practice. He added that the culture of the society can dictate the way the surgeon deals with his patients.

Ahmed Abdel Azeem gave an interesting talk about "How to give a lecture", which is a necessary skill for all trainees and senior surgeons.

Khaled Emara spoke about the difficulty that doctors face against bone setters and witch doctors in some parts of the world.

Maher Halawa spoke on the various fellowships at different SICOT training centres all over the world, which SICOT offers every year to enhance training. He asked more doctors to come forward and join SICOT, and take part in its congresses.

The presented papers showed a higher standard in research compared to previous years. The topics varied from clubfoot management, OrthoSUV for deformity correction, two-stage management of infected non-unions, prosthetic replacement for tumours of the proximal femur, to Philos plating, chronic ACJ injuries and hip FAI management. There were 2 papers by SICOT fellows about the ACL tests and traditional bone setters in Nigeria.

Three prizes of EGP 1,000 each were awarded to the best papers:

1. Amr Ataf Abdulsalam, Assiut, Egypt, "Prevalence of FAI among Egyptian young adults, part of a multicentric study".
2. Mbute Namunguba, Kenya (Assiut SICOT fellow), "Diagnostic accuracy of the Lelli test in the evaluation of ACL injuries".
3. Mohamed Al-Kersh, Ain-Shams, Cairo, "Comparative study between one-stage versus two-stage strategies in the management of infected, un-united fractures of the femur".
Article of the Month

January 2014

The effect of a collar and surface finish on cemented femoral stems: a prospective randomised trial of four stem designs
Jonathan Hutt, Alexandra Hazlerigg, Ansari Aneel, Geoffrey Epie, Husam Dabis, Roy Twyman & Andrew Cobb

Purpose The optimal design for a cemented femoral stem remains a matter of debate. Over time, the shape, surface finish and collar have all been modified in various ways. A clear consensus has not yet emerged regarding the relative merits of even the most basic design features of the stem. We undertook a prospective randomised trial comparing surface finish and the effect of a collar on cemented femoral component subsidence, survivorship and clinical function.

Methods One hundred and sixty three primary total hip replacement patients were recruited prospectively and randomised to one of four groups to receive a cemented femoral stem with either a matt or polished finish, and with or without a collar.

Results At 2 years, although there was a trend for increased subsidence in the matt collarless group, this was not statistically significant (p = 0.18). At a mean of 10.1 years follow-up, WOMAC scores for the surviving implants were good (Range of means 89–93) without significant differences. Using revision or radiographic loosening as the endpoint, survivorship of the entire cohort was 93% at 11 yrs, (CI 87– 97%). There were no significant differences in survivorship between the two groups with polished stems or the two groups with matt stems. A comparison of the two collarless stems demonstrated a statistically significant difference in survivorship between polished (100%) and matt (88%) finishes (p = 0.02).

Conclusions In the presence of a collar, surface finish did not significantly affect survivorship or function. Between the two collarless groups a polished surface conferred an improved survivorship.

International Orthopaedics (SICOT)
DOI 10.1007/s00264-013-2256-z
Case of the Month

January 2014

Authors: Prasad Ellanti¹, Syah Bahari², Tom McCarthy¹
¹Department of Orthopaedic Surgery, St James' Hospital, Ireland
²School of Medicine, KPJ Healthcare University College, Malaysia

History

A 63-year-old female attended the Accident and Emergency Department complaining of lower back and left groin pain for several weeks. She was prescribed pain medication by her GP but unable to relieve the pain. She was able to mobilise full weight-bearing. Examination of the left hip was unremarkable as well as other clinical examination. She was apyrexial. She had a background history of multiple myeloma and chronic anaemia. Her Hb was 9.5, WCC 2.4 and her neutrophil was 2.2.

This was her pelvic radiograph.

Q. What are your thoughts on the radiograph?

Please click to continue
The plain radiograph of the pelvis was reported as normal.

Q. What further investigation would you perform considering her background history?
Due to her history of myeloma, she would be at risk of fracture of the vertebra and possible compression of the spinal cord. An MRI scan was performed to further investigate this.

This was her MRI scan.

Q. What are your thoughts?
There is significant marrow infiltrate due to the myeloma. However, there is no evidence of recent vertebral fracture or spinal cord compression.

The patient was then treated with analgesia and physiotherapy for the back and groin pain. However, 3 days after admission, the patient developed a fever of 38° Celsius. Her MSU and blood culture grew E. Coli and she was started on an antibiotic for urinary septicaemia. However, the pain on her lower back and groin became worse.

Q. What would you do next?
An MRI scan of the pelvis was performed.

The MRI scan showed a left iliopsoas abscess.

Q: What is your management?
A CT-guided drainage of the abscess was performed. The aspirate culture grew E. Coli and she continued on antibiotics for 6 weeks.

She was recovering for 3 months after the admission; she developed severe left hip pain. She denied any history of trauma. Examination of the left hip was painful on passive ROM.

This was her plain radiograph of the pelvis.

Due to her recent history of left iliopectoas abscess, left hip septic arthritis was likely to be the cause considering the short-term progression of the left hip degeneration. She was advised for a staged total hip replacement. She underwent the initial excision of the femoral head and insertion of a spacer, followed by a total hip replacement (THR) after 3 months which resulted in a satisfactory outcome.

**Discussion**

Iliopsoas abscess is an uncommon condition with an incidence of 12/100,000 worldwide [1]. The condition was
initially described by Mynterin in 1881. This condition is more common in the least developed and developing
countries, where it is commonly secondary to vertebral TB [2].

Iliopsoas abscess can be divided into primary and secondary iliopsoas abscess. Primary iliopsoas abscess is likely
to occur in patients with a history of diabetes mellitus, IV drug users, AIDS, renal failure or immunocompromised.
Secondary iliopsoas abscess is associated with a condition such as Crohn's disease, chronic UTI, lower GI cancer
and vertebral osteomyelitis [3].

The common organism responsible in primary iliopsoas abscess is Staph. Aureus. However, in secondary iliopsoas
abscess the responsible organism is Strep. Sp and E. Coli [1].

Treatment for iliopsoas abscess is by drainage of the abscess and appropriate antibiotic as per culture and
sensitivity [2]. In this case, we opted for CT-guided drainage as it has a lower morbidity than open drainage.

However, septic arthritis secondary to iliopsoas abscess is considered rare. We found only 2 similar case reports
on this. In both cases, the patients underwent staged THR with satisfactory outcome [4,5].

References
   (1986) 10:834-43
   Musculoskeletal Disorder (2010) 11:176
4. Compain C, Michou L, Orcel P, Hannouche D, Richette P. Septic arthritis of the hip with psoas abscess
5. Ash N, Salai M, Apther S, Olchovsky D. Primary psoas abscess due to MRSA concurrent with septic arthritis
Ishaq Bamidele Ojodu  
SICOT Active Member - Nigeria

I was indeed privileged and honoured to have been given the 2013 "SICOT meets SICOT" Fellowship back in the winter of 2012. The award was a dream come true for me, as I had patiently awaited such an opportunity to come my way. I immediately swung into action to actualise this rare opportunity and privilege of a lifetime. I was eventually granted a German visa, after some initial delays, to proceed to my fellowship at the Klinik für Unfall-, Hand- und Wiederherstellungschirurgie, Universitätssklinikum des Saarlandes Homburg/Saar, Germany, under the able leadership of Prof Tim Pohlemann.

Myself and Prof Tim Pohlemann

I promptly settled down to work, after the routine orientation of the department and the facilities. The clinic is run by seven consultants and several resident doctors at different levels of training. A typical day usually starts at exactly 7 a.m. with the ward round, led by Prof Tim Pohlemann, followed by a morning clinical meeting, with a review of the cases of the previous day. Afterwards, I participated actively in the operating session. I was taught the rudiments of pelvic and acetabular reconstruction techniques personally by my boss, Prof Pohlemann, and Dr Joerg Holstein, in addition to gaining significant exposure in arthroscopic procedures of the shoulder, elbow and knee, spine fixation techniques as well as reconstructive surgeries of the soft tissues.
My skills in trauma management also improved during the fellowship period. I was particularly interested in pelvic and acetabular reconstruction techniques, of which I learnt a great deal directly from the world acclaimed expert in the field, Prof Pohlemann, who despite his busy schedule was always ready to provide unambiguous answers to all my enquiries.

I picked up fine arthroscopic techniques from the versatile and experienced Dr Antonius Pizanis, and from the energetic, vibrant and innovative friend of mine, Dr Sascha Hopp, who has recently published a paper on a novel arthroscopic technique in the management of athletic groin pain.

Prof Werner Knopp and Drs Antonius Pizanis and Birgit Reischmann provided me with the impetus I needed in the field of hand/soft tissue reconstruction and spine fixation respectively.

The review of the day’s surgical activities, as well as the following day operation planning were usually done at the afternoon clinical meeting. During my fellowship, I participated actively in research activities of the department, both at the clinic and in the experimental surgical laboratory. I was therefore able to perform some animal experiments in the laboratory as well as successfully completing a scientific paper on complex pelvic fractures in the elderly, awaiting publication. This is in addition to being actively involved as co-author in another three different scientific papers.
I made new friends not only from Germany, but also from Thailand, Malaysia, and Uzbekistan, to name just a few. My busy schedule was spiced with visits to some historical sites and recreational facilities in Homburg and Zweibrücken. Though the language barrier is a significant factor in Germany, I was able to overcome this by picking up some important vocabulary needed for day-to-day interaction.

I am indeed very grateful to SICOT for this unique opportunity to learn directly from experts in the field of orthopaedics and traumatology, especially in the field of pelvic and acetabular reconstruction. My appreciation also goes to Prof Tim Pohlemann and his team for their hospitality, encouragement and above all for imparting their knowledge to me, which will serve as the foundation for my future professional development. My gratitude also goes to my soulmate, caring and loving wife, Bukola, and to my children for their sacrifice, encouragement and support during my fellowship period.
Clinical Research Fellowship in Shoulder Surgery at The Johns Hopkins University

This one-year fellowship is designed to provide advanced exposure to shoulder conditions and operative procedures and also to provide the opportunity to do research. The fellow will observe surgery and clinic and attend educational conferences. There are many opportunities for research with the goal to publish as many worthy papers a year as possible. The fellowship is one year in length. Contact Ed McFarland MD at emcfarl@jhmi.edu if interested.
History of Orthopaedics

Skeletal Injuries and Orthopaedics in Ancient Egypt

Galal Zaki Said
SICOT Distinguished Member – Assiut, Egypt

Egypt had professional doctors as early as the old kingdom, five thousand years ago. There were also specialists in different branches of medicine. Homer c. 800 B.C. remarked in the Odyssey: "In Egypt, the men are more skilled in medicine than any of human kind". Hippocrates, Herophilus, Erasistratus and later Galen studied at the temple of Amenhotep, and acknowledged the contribution of ancient Egyptian medicine to Greek medicine.

Mummified bodies, skeletal remains and wall paintings have shown us some of the ancient orthopaedic practices. There are many examples of excellently handled fractures of the long bones that had united in perfect alignment. Fractures were treated by splinting with pieces of bark or wood padded with linen. This is particularly impressive in a case of oblique fracture of the femur in an adult, which united without any over-riding (Figure 1).

![Figure 1: Fractures of long bones which have united in perfect alignment. Note also the oblique fracture of the femur which has united without any overlap](image1)

Joint dislocations are depicted in Ipuy’s tomb, Ramses II’s sculptor, by which a person is setting the shoulder of a prostrate workman, which is similar to the method devised by Kocher for reducing dislocated shoulders, three thousand years later (Figure 2).

![Figure 2: Painting from Ipuy’s tomb in Thebes. A person is setting the shoulder of a prostrate workman](image2)

Probably the oldest medical document ever written is the Edwin Smith surgical papyrus. The papyrus is a copy of an original which dates to about the 30th century B.C., the time of pyramid building. In this papyrus, forty-eight
cases, mostly injuries, were described free from any magic. Descriptions of the patients and their treatment were detailed systematically starting with wounds of the scalp, fractures of the skull exposing the brain, fractures of the neck with paralysis of the arms and legs, fractures of the collarbone and moving down to the extremities. The author, commonly believed to be Imhotep, instructs the treating physician first to listen to the patient's complaint and then to examine him using his eyes and hands. After reaching a diagnosis he makes a declaration: an ailment which I would treat, an ailment which I would contend and an ailment which I would not treat. This formal, structured and logical approach is the basis of our current approach to the patient. Two examples of these cases are cited here:

- **Case 31: Traumatic quadriplegia:** "If you examine a man having dislocation in a vertebra of his neck, should you find him unconscious of his two arms and his two legs, while his phallus is erected... and urine drops from his member without his knowing it..." "...it is a dislocation of a vertebra of neck extending to his backbone..., an ailment for which nothing is done".

- **Case 35: Fracture of the clavicle:** "If you treat a man for a break in his collarbone and you find his collarbone shortened and out of alignment with respect to its companion, an ailment I will treat. Place him prostrate on his back with something folded between his shoulder blades; you should spread out with his two shoulders to stretch apart his collarbone until break falls in its place".

The ancient Egyptian surgeon has evidently practised autopsy. They describe a case of closed fracture dislocation of the cervical spine as a vertebra “sinking into the interior of the neck as the foot settles in cultivated soil”, where one vertebra is said to “penetrate into the other”. He could distinguish between fractures and luxations by crepitus, and defined sprain as “rending of two membranes although each is still in its place”.

Infected open fractures with fever were considered grave injuries. The favourite dressing of the wound in the first day was fresh meat (haemostatic). In the following days a dressing of honey (hygroscopic) and oil (to prevent sticking of the dressing) was used unless it was feared it would interfere with drainage. The application of mouldy bread was also practised (in modern days, penicillin was first extracted from moulds).

Several cases of tuberculosis of the spine were reported as early as the predynastic time. The most authenticated case is that described in Nesparehan, a priest of Amun. It shows the typical collapse of a dorsal vertebra with angular kyphosis and a big psoas abscess in the right iliac fossa (Figure 3).

![Figure 3: Nesparehan: a priest of Amun, 21st dynasty: Pott's disease of the spine with typical deformity and a big right psoas abscess](image)

Several examples of congenital anomalies, deformities and hormonal disturbances are present in Ancient Egyptian history. Seneb is a typical example of an achondroplasic dwarf in the 19th dynasty (Figure 4). He held important priesthoods in addition to being overseer of weaving of the palace. Other dwarfs were employed as personal attendants and entertainers. In addition, skeletons of two achondroplasic dwarfs were found in a necropolis of Hierakonpolis in Upper Egypt (Figure 5).
A case of severe bilateral clubfeet is depicted in a Middle Kingdom tomb of Baqt in Beni Hassan. The word djeneb meaning “crooked” is written above it. A recent CT scan of the feet of Tutankhamun, the golden Pharaoh of the 18th dynasty, revealed that he suffered from severe varus deformity of his left foot which was also appreciably short (Figure 6). This is probably why the Pharaoh was sometimes depicted using a walking stick.

The Queen of Punt in a bas relief from the temple of Queen Hatshepsut in Dair El Bahari (18th dynasty) raises a diagnostic problem. She is excessively obese, with exaggerated lumbar lordosis, suggesting spondyloptosis or bilateral congenital dislocation of hips (Figure 7).
Poliomyelitis was also known at that time as shown in some paintings and sculptures of a doorkeeper, where his leg is wasted, shortened, with an equinous foot and a walking aid is used (Figure 8).

Probably the oldest known prosthesis is that replacing the right big toe in a mummy of a woman found in excavations at the necropolis of Thebes (Figure 9).
Surgery was evidently advanced in Egypt at the end of the dynastic era as shown by the elaborate surgical instruments engraved in a panel in Kom Ombo Temple (180-47 B.C.) (Figure 10). Two cases of successful amputations, one of arm and the other of leg, were recorded in the literature suggesting the use of the bone saw.

![Figure 10: Surgical instruments, Kom Ombo Temple: (1) knives; (2) drill; (3) saw; (4) forceps or pincers; (5) censer; (6) hooks, and so on](image)

We might never fully grasp the medical and surgical advancement of Ancient Egypt, yet these paintings and sculptures open our imagination to the possible state of Orthopaedics thousands of years ago...

*International Orthopaedics – © Springer-Verlag Berlin Heidelberg 2013 10.1007/s00264-013-2183-z – Published online: 17 November 2013*
International Meetings & Courses

- **The Cambridge Basic Science FRCS (Orth) Course 2014**

This is an intensive course on Orthopaedic Basic Sciences aimed at trainees who are in their earlier years of training and those preparing for the FRCS (Tr & Orth) examination. The course is also suitable for surgeons in practice who wish to refresh their knowledge in Orthopaedic Basic Sciences. Read more...

- **The Singapore Basic Science FRCS (Orth) Course 2014**

The Tan Tock Seng Hospital in Singapore is organising a Basic Science FRCS (Orth) Course on 28 and 29 March 2014. This course would be beneficial to young surgeons in the region who are planning to take the FRCS (Orth) or SICOT Diploma Examination. Read more...

- **IOC World Conference on Prevention of Injury & Illness in Sport 2014**

The IOC World Conference on Prevention of Injury & Illness in Sport will provide the world’s leading sports medicine experts with an opportunity to present their work to an international audience of physicians, therapists, scientists and coaches. The aim is to present evidence-based information on methods to prevent injuries, illness and other health problems associated with sports participation, using a multidisciplinary perspective. Read more...
Efficacy of platelet-rich plasma in the treatment of degenerative knee pathology

ACE Review by OrthoEvidence

Synopsis

Six ACE Reports (5 randomized controlled trials and 1 systematic review/meta-analysis) were identified from the OrthoEvidence database which evaluated the efficacy of platelet-rich plasma in the treatment of knee osteoarthritis. All included studies were randomized controlled trials, and reported clinical and functional assessment at various time points between 1 and 6 months following treatment. Pooled analysis of the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) Total scores suggested a possible beneficial effect with PRP injection in comparison to saline and a lower effect versus hyaluronic acid. Beneficial effects were also noted for individual subscales of the WOMAC assessment (pain, stiffness, and physical function). However, pooling of OMERACT-OARSI responders and a review of the literature indicated that there was no significant difference between PRP and comparison groups in other functional outcome measures, such as the International Knee Documentation Committee (IKDC) assessment and Knee Injury and Osteoarthritis Outcome Score (KOOS). Furthermore, contrasting results were obtained between two studies reporting function on the Lequesne Index. The discrepancy in the efficacy of PRP in treatment for osteoarthritis of the knee indicates the need for future high-quality randomized trials, with uniform reporting, in order to provide further evidence in this emerging treatment method.

What was the principle research question of the Review?

Were intra-articular PRP injections (plasma rich in growth factors and autologous conditioned plasma) more effective in treating degenerative knee pathology than hyaluronic acid or saline injections?

Report Characteristics:

Six reports from the OrthoEvidence database were identified that evaluated the use of platelet-rich plasma injection(s) in the management of symptomatic knee osteoarthritis. Five of the included reports were of randomized controlled trials, and 1 was a systematic review/meta-analysis. The included studies ranged in publication date from August 2012 to February 2013. A total of 480 patients were included in the four trials.

What should I remember most?

The results of this review suggest that intra-articular platelet-rich plasma injections are beneficial in reducing pain caused by degenerative knee diseases, in comparison to hyaluronic acid and placebo injections. Additionally, total WOMAC scores supported the application of platelet-rich plasma injections when analyzed against both hyaluronic acid and placebo injection groups, and benefits were seen in individual WOMAC subscales. No significant differences between the groups existed for IKDC and KOOS outcomes, and outcome on the Lequesne Index was conflicting. Overall, as pooling of the majority of outcomes was not possible for the four included studies, the efficacy in the utilization of platelet-rich plasma and other related products in the treatment of knee osteoarthritis and gonarthrosis remain inconclusive.

Implications for patient treatment and future research:

Pain reduction in osteoarthritis and gonarthrosis patients may be achieved with the use of platelet-rich plasma injections. However, due to the inability to pool the spectrum of functional outcomes, advocacy of widespread application of platelet-rich plasma as a treatment method should be withheld until future studies have provided more insight on the efficacy of this treatment with uniform methodology.
Orthofix ABS. A touch of Orthofix knowledge

Start to explore the wide range of Orthofix solutions for different anatomical areas

iPad - Download from App Store
Android tablet - Download from Google Play Store
Smartphone and PC - Website: abs.orthofix.it
Disclaimer: Some of the views and information expressed in this e-Newsletter include external contributors whose views are not necessarily those of SICOT. SICOT is not responsible for the content of any external internet sites.