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Issue 5

October 2011

Orthopaedic Surgeons

Dr. David Carmody, who joined Sydney SportsMed Specialists as our Foot and Ankle Specialist in 2010, has grown his practice over the past year such that he is doing more regular sessions at our clinic. Earlier this year, **Dr. Matthew Sherlock** also joined our practice, specialising in Shoulder and Elbow Surgery. Matthew mainly operates out of lower and upper North Shore, and currently consults here on a fortnightly basis. Our other visiting Orthopaedic Surgeons, **Dr. Peter Walker** and **Dr. Michael Dixon** continue to provide an excellent specialist service, both looking after Hips and Knees. **Dr. Simon Tan** also continues to provide his high level of service for patients with shoulder and knee problems

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Welcome to our 2011 Sydney Sportsmed Specialists Newsletter, updating you on some of the exciting changes in our practice. Our practice has just undergone some recent renovations and expansion to add a further two consulting rooms, manager's office and a procedure room, as well as expanding our reception and waiting room areas. We invite you at any stage to pop in to view the premises. Over the past year, the practice has also acquired a state of the art Terason 3000 Ultrasound to assist with guided injections, as well as patient education.

SPORTS PHYSICIANS NEWS

Our specialists in the practice have been busy over the past year. As many of you would know, in November 2010, the Federal Government, its various bodies including Medicare, and the AMC accredited full specialist status to Sport and Exercise Physicians. Whilst this may have inconvenienced some patients to require GP referrals, it has also meant improved rebates to patients, access to Medicare rebatable MRIs, as well as better communications to all concerned.

Dr. Diana Robinson has been instrumental in working with the Australasian College of Sports Physicians in dealing with compliance issues for the specialisation process, and has recently completed a massive task of writing a revised curriculum and assessment program for the training of Sport and Exercise Physicians. For those patients who have difficulty or prefer not to get a GP referral, they can still have access to our Registrar, who for 2010 to 2011 has been **Dr. James Lawrence**. He has provided excellent service to patients thus far, supervised by our sports physicians. We are also excited to announce that next year we will be joined by a Final Year Registrar, **Dr. Thomas Gan** who will commence in February. Again, he will be available to see non referred patients.

Dr. Ameer Ibrahim has recently returned from Sri Lanka, having travelled with the Australian Cricket Team for their recent One Day and 20:20 Cricket Tournament. Ameer will continue to have an important role with the Australian Cricket Team, moving forward into 2012 with various tours. Dr Ibrahim was recently reappointed as a member of the Combat Sports Authority by Her Excellency the Governor of NSW for a further 12 months. He continues to be deputy medical officer at the Roosters NRL team.

Dr. Donald Kuah has been appointed as the Deputy Medical Director to the Australian Olympic Team for London 2012. Donald has previously been to Olympics in Beijing and Athens as part of the Medical Team for Australia, and was previously the Clinical Director for SOCOG at the Sydney 2000 Olympic Games.

EDUCATIONAL SEMINAR

Please find enclosed your invitation to the Educational seminar which is scheduled for Wednesday 23rd November 2011.



Regenerative Medicine

Sydney Sportsmed Specialists have for the past two years been at the forefront in the use of Platelet Rich Plasma in management of musculoskeletal injuries. At this practice, this is always performed using direct vision ultrasound guidance. For those who may be interested, please feel free to look at the website, www.prpoinjection.com.au. There has been a level 1 randomised double blinded controlled study published in the American Journal of Sports Medicine in June of 2011 with positive results from PRP in treatment of tennis elbows.

Over the past year, the Sports Physicians at Sydney Sportsmed Specialists have been involved in an exciting project, training and working in the area of **fat derived stem cell therapy**. This has been done in conjunction with a leading company called Regeneus who are the only fat derived stem cell company specialising in musculoskeletal medicine and are also the only ones involved in randomized controlled research on this area. The centre has now performed a number of stem cell procedures on patients with osteoarthritis (as well as for chronic tendinopathy), with very promising results thus far. Please find below, an article with some further information on the use of stem cell therapy in musculoskeletal medicine. Please feel free to approach any of our Sports Physicians regarding the use of stem cell therapy.



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STEM CELL THERAPY

The use of Stem Cell treatment for a wide variety of conditions is accelerating at a rapid pace throughout the world. The doctors at SSS have been working quietly for 12 months investigating the possible applications of stem cell treatment for musculoskeletal conditions.

What are stem cells? Mesenchymal stem cells (MSC) are derived from many different tissues throughout the body including bone marrow, adipose tissue, muscle, liver, brain and umbilical cord tissue. They are situated around the capillaries of the tissue and are believed to act as resident precursor cells for tissue turnover and repair. Fat is particularly rich in mesenchymal stem cells, known as Adipose Derived Stem Cells. (ADSC) and subcutaneous fat tissue is relatively easy to harvest with a mini-liposuction procedure. Clinically relevant cell numbers can be accessed by this procedure, rendering cell culture and expansion procedures unnecessary.

What do MSC do? Mesenchymal Stem Cells are known to have a number of functions; firstly, they have differentiation potential, and may differentiate into a variety of cell types for potential tissue repair and renewal. However they also have secretory potential, and it is now well established that much of the clinical effect of MSC is due to this latter process, whereby chemicals such as cytokines (anti-inflammatory) and growth factors (growth stimulation of resident cells, eg chondrocytes) are secreted and have a direct affect on the tissue of the joint or tendon,

How does the procedure work? Our patients undergo a mini-liposuction procedure under light sedation and local anaesthetic. The adipose tissue is harvested from the subcutaneous fat around the abdomen, or occasionally the flanks. The material removed is then transferred to an on-site laboratory where the cells are processed and delivered back to the sports physician within 2 hours in an injectable form. The stem cells are then injected into the affected joint or tendon under ultrasound guidance.

Research? There have been a number of studies on the use of ADSC therapy in dogs for osteoarthritis. These have shown a statistically significant improvement in the treated cases in regards to lameness, functional disability and stiffness when compared to controls. The studies and follow-up continue but the benefits have persisted for up to 3 years at this stage. Experience of MSC treatment on race horses with tendon injuries is also very promising. The first randomised double blinded controlled trial on knee Osteoarthritis in older patients is currently underway by researchers from Sydney University.

Current expectations? Experience with humans is emerging and the doctors at SSS feel that this treatment has great promise, for both moderate to severe osteoarthritis and chronic recalcitrant tendinopathies. At this stage we have performed the treatment for knee and ankle osteoarthritis, and common extensor origin tendinopathies. There appears to be three phases to the post injection clinical course which we have derived from both human experience and animal studies. Patients have an immediate benefit, with a significant improvement in pain and an improvement in mobility within the first 10 days. During the next weeks to months, in the so-called intermediate phase, there is a continued improvement in pain and an increase in quality of life. In the late phase, the benefits seem to stabilise and persist for at least 2-3 years, on the data available thus far.

Who is likely to benefit from ADSC treatment? Anyone with an appropriate condition can undergo Stem Cell treatment, but we feel it has specific promise for the younger person with osteoarthritis of their knee, ankle, shoulder, elbow or wrist, where it is important to try and delay a joint replacement for as long as possible. Those people with chronic tendinopathies who have failed conservative treatment such as eccentric exercises, corticosteroid injections, and PRP would also be appropriate. It is our impression that patients with major malalignment of the affected joint and who are obese may not respond as well as other groups. It is unknown, in the early stages of our experience of this treatment, whether patients with chronic illnesses will respond in the same manner as healthy patients.

Are there any side effects? The potential side effects relate to both the liposuction procedure and the intra-articular or intra-tendinous injections. In addition to infection, bleeding and bruising of the liposuction site, side effects are similar to those which may occur with any injection to the joint or tendon structures. These potential side effects will, of course, be discussed with each individual patient prior to the procedure.

How do my patients access this treatment? Dr's Robinson, Kuah and Ibrahim are all trained in the stem cell treatment and have been working with Regeneus and a number of surgeons for twelve months to ensure that they have an excellent working knowledge of the procedure and processes. Please feel free to refer your patients for an opinion or discussion about the appropriateness of this procedure for their particular condition. You may wish to initially refer patients to the website at www.regeneus.com.au for further information.