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St Vincent's SportsMed specialises in:

- Arthroscopy
- Sports Medicine
- Knee Ligament Reconstruction
- Shoulder Reconstruction
- Meniscal/ Cartilage repairs
- Orthopaedic Trauma

The Olympic Experience

Dr Scott Burne

The World Champion Women's Basketball Team (2006), the Opals, left Australia on 31st July with high expectations of success in the 2008 Beijing Olympics. As Team Doctor for the past 5 years, including the 2004 Athens Olympics, I had shared a lot of their recent successes. I was as keen as anyone to see the team achieve the one goal that had thus far eluded them – Olympic Gold. Certainly, we had a team that was capable, but all players would have to be fit and mentally prepared for the USA, which has a wealth of depth and experience.

Our team contained such names as Lauren Jackson (previously two-time Most Valued Player in the USA), Penny Taylor (MVP for 2006 World Championships) and a number of past Olympians such as Belinda Snell, Kristi Harrower, Laura Summerton and Suzy Batkovic.



A major problem for Australia is that most players only come together just before the majors, thus meaning preparation has to be precise and focused. Prior to this Olympics, the Opals spent 2 days with The Australian Army, honing in on team building. Following this, we had two home games against the strong Brazilian team.

After a pre-Olympic tournament, where the USA pipped us in the final by 5 points, we moved on to Beijing. The Opals had traveled there in April, and had played at the Olympic venue. Despite this, the thrill of being there for the Olympics was with every player.

The Olympic Village was outstanding. The accommodation (always a tight squeeze in the Olympics) was clean, well-prepared and closely located to the food hall and transport. Most venues were closely located to the village, a great advantage for the athletes. It was amazing to walk around the village, seeing famous sportspeople and personalities. We were visited by current and past Prime Ministers, TV personalities, previous Olympic Gold Medal winners, and even Australian Royalty, Princess Mary of Denmark.

To safely get to the Gold Medal game, we would need to (effectively) win all preliminary games so that we did not meet



Dr Burne in Beijing



Dr Scott Burne

the USA in the semi-final. We did achieve this, but the Opals did not hit their straps in the early games. They won comfortably enough, but form suggested they would be no match for the USA if there was not substantial improvement.

This occurred with an impressive win against Russia. Then disaster struck in the quarter-

final versus Czech Republic: our top shelf player and scorer, Penny Taylor got caught in a tangle of legs in an attempted drive to the basket. She ruptured her lateral ligaments and went down in severe pain in front of many gasping Aussies. With her ankle in ice, many questions were being asked of me, whether she would be available for the rest of the tournament. She had a 6 week injury, with bone bruising to the inside of the ankle, as well as gross instability and swelling.

As all this was going on, we were managing the chronic, worsening injury to the ankle of our other superstar, Lauren Jackson. Lauren had previously undergone a successful reconstruction and cartilage operation by Dr Martin Sullivan of St Vincent's Clinic several years ago. Playing in 2008 she had been



Lauren Jackson with Dr Scott Burne

increasingly aware of pain building up at the front of the ankle. Then suddenly, pain increased in the Brazil games before we left Australia. An MRI showed a broken bone spur that was impinging the ankle, with resultant inflammation. Now, with the finals on us, she was requiring injections almost every game and training session just to be able to play.

Penny missed the excellent win versus China. We felt we could get her on for the final. With much icing, physiotherapy, taping and injections prior to the final, the tenacious Penny Taylor took the court for the final. Lauren, injected also, and under constant physiotherapy treatment leading up to the final, also played in the starting 5.

History will show that the Opals were badly beaten in the final.

Photographs will show a very dejected bunch at their Silver Medal presentation. Journalists wrote of the disappointing result and label the team unfairly.

However, we lost to an amazing team with great depth and ability. The Opals played well below their best. In addition the Opals two leading scorers and impact players were badly injured, which effectively cruelled our chances.

Lauren went on to have her injury treated successfully at St Vincent's by Dr Sullivan. She is now playing without pain in Russia. Penny had physiotherapy in Melbourne and is also back playing in Russia.

Managing their injuries through the Olympic Games was an intense and rewarding experience. Only one game was lost. I felt that getting both players to the final was a great achievement, and much credit should go to the physiotherapist and the players themselves. Overall, it was a great experience with many fantastic memories.



Penny Taylor with Ronaldinho



Penny Taylor

Synthetic Ligaments of the knee

Dr Simon Tan

One of the hottest topics in sports knee surgery is synthetic ligaments. There is a lot of commentary on the recent use of these synthetic ligaments, some of it misleading.

Synthetic ligaments have been around for more than 3 decades. They were developed to provide an artificial replacement for a ruptured or torn ligament and hence avoid donor site morbidity (problems arising from taking a ligament from elsewhere). There have been carbon and plastic implants, suture style implants and products made from Gortex and Dacron which are materials better suited for vascular grafts.

Over 20 years ago, a device known as the **LARS: Ligament Advanced Reinforcement System** was developed by a French surgeon (Dr JP Laboureau). Earlier models which failed necessitated changes to the ligament, however the current design has been available for clinical use since 1990.

Past synthetic ligaments have been too elastic (lacking stiffness). They have been made of poor quality material and have been unable to resist the normal biomechanical stresses within a joint. Some ligaments have caused severe synovitic inflammatory reactions.

The current LARS was developed with changes in the sterilisation technique and the knitting of the fibres, two areas which were presumed to be the cause of the reaction. The adjustments have been successful, as to date there have been no documented synovitic reactions.

Comments are abundant in the popular press and internet sites relating to failed grafts and stretched ligaments but it is worth noting they are often not related to the LARS, but to other synthetic ligaments. There are no reports of synovitis resulting from use of the LARS in the published literature.

Biomechanics of the LARS

The LARS is a knitted ligament, with different sizes available. There are different types for each ligament in the knee. They are also available for the shoulder, elbow and ankle.



The LARS Ligament



Surgery with the LARS Ligament

It is made of industrial strength polyester fibre with a specifically designed section to be placed within a joint.

Favourable mechanical properties include secure fixation to bone, its high stiffness and its strength. (Requires over twice the applied force to rupture compared to a normal ACL) It also has durable characteristics maintaining exactly the same mechanical properties after 10 million cycles of stress testing.

The company does not recommend the LARS for everyone and having attended the designer's course, I believe there are clear indications for its use and patient selection. I have been very happy in its use for the past 12 months in extra-articular knee surgery which includes collateral ligament injuries, posterolateral corner and posterior cruciate ligament tears. In these scenarios the LARS acts as a scaffold- a super strong device the body can use to grow into whilst the patient can conduct accelerated rehabilitation. I have personally found patients recovering at an amazing rate following LARS surgery, months ahead of traditional reconstructions.

While synthetic ligaments have had a controversial beginning, it is clear developments and improvements in design have resulted in a very promising technology. In the right patient with the relevant injuries, synthetic ligaments can play a vital role.

Fan, Q. et al. (2008):

Comparison between four-strand semitendinosus tendon autograft and ligament advanced reinforcement system for anterior cruciate ligament reconstruction by arthroscopy.

Zhongguo Xiu Fu Chong Jian Wai Ke Za Zhi. 2008 Jun;22(6):676-9.

Nau, T. et al. (2002):

A new generation of artificial ligaments in reconstruction of the anterior cruciate ligament.

JBJS (Br), Vol 84b (3), pp. 356-360

Research and Education

St Vincent's SportsMed was delighted to have Chicago surgeon Dr Tony Romeo as its guest recently. Dr Romeo is a highly respected surgeon from the Rush Medical Centre in Chicago. He has a world wide reputation for his expertise in shoulder surgery and was able to spend time at St Vincent's Sportsmed adding his valuable knowledge in the region of Fascio-scapulo-humeral Dystrophy. (A congenital muscular dystrophy)

Dr Tan, Dr Bathgate and Dr Burne presented an information session for physiotherapists in November. Topics discussed include Dr Burne's Olympic experience as team doctor for the Australian opals, an update on the new LARS ligament by Dr Tan and sporting injuries of the hand and fingers by Dr Bathgate. Please contact the clinic if you would like further information or would like to attend these sessions.



Dr Tony Romeo with Dr Simon Tan

News around the office

Dr Sarah Hornery-Practice Manager:

What an experience. Sarah recently took time off to head game fishing off the coast of Northern Australia. An amazing trip except for the 80kg marlin that got away!

Julie Law-Medical Secretary:

Julie's daughter Hannah seems to be a sports star in the making based on her latest successes. She recently received awards in junior basketball, soccer and athletics as well as winning the CGSSA award for netball. Well done Hannah! Congratulations also to Sam, Julie's son who has completed his school certificate, winning the school history prize.

Abbey Evans-Medical Secretary:

We say good bye to Abbey at the end of this year as she heads over to the UK to continue her studies. Hoping to commence her PhD in the New Year, we wish her all the best and thank her for the great contribution she has made to St Vincent's Sportsmed.

Dr Simon Tan-Orthopaedic Surgeon:

Dr Tan has won the UNSW Clinical School tutor of the year award. Voted for by medical students, Dr Tan was very honoured to receive this award. Congratulations also to his daughter Emily who recently won the highest academic achievement award in her school year.

Go to www.stvincentsportsmed.com.au

Sports Physicians can see all patients at St Vincent's SportsMed at any sporting or exercise level, without a referral.



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