ORTHOSPORTS

QUESTION FOR PHYSIOTHERAPISTS

During the Annual Orthopaedic Updates lectures at UNSW in 2013, you were somewhat skeptical about the use of the LARS ligament for ACL reconstructions. I would be interested to know if your opinion on LARS ligaments has changed since 2013?

The LARS ligament is a synthetic ligament replacement made from industrial strength polyester. It was designed to obliviate the need for harvest of allograft tendons and associated morbidity and to allow the early return to pre injury activities. It has also been advocated as a ligament augmentation device to support small sized allografts.

While these are desirable goals, synthetic ligaments have been extensively trialed during the 1980s and found to have unacceptably high complication and failure rates. The main issues being mechanical failure, foreign body synovitis/inflammation, early osteoarthritis and tunnel widening.

The ACL is subjected to repetitive cycling under load during normal activities, the native ACL as well as integrated allograft tendons have the ability to respond to stress as well as a regenerative potential, synthetic ligaments do not, they are therefore at high risk of eventual failure in the medium to long term.

The mechanical wear on the prosthesis may lead to liberation of foreign body particulate matter into the joint causing persistent inflammation, sinovitis, pain and premature degeneration of the articular cartilage. This plus the abrasive nature of synthetic grafts often leads to widening of the femoral and tibial tunnels complicating revision surgery.

Despite industry assurances that the LARS and other similar ligaments are not prone to the above, it appears they have the same issues as previous generations of synthetic ligaments. Certainly the cases needing revision that have presented to my practice have demonstrated the issues discussed above.

In summary, LARS ligament in ACL reconstructions have a much higher failure and complication rate then traditional techniques and therefore in my opinion are not recommended.