

Too many knee arthroscopies?



By Dr Sandra Mejak
Sport and Exercise Physician, Karrinyup

I was a member of the Australian Commission on Safety and Quality in Healthcare's recent Knee Expert Advisory Group, looking at knee arthroscopy and OA. The group included members from orthopaedics, rheumatology, sports medicine, radiology, general practice, nursing, physiotherapy, and consumer representatives.

Over a year we examined the research regarding arthroscopies, other interventions for knee OA, lead body position statements and more.

Knee arthroscopies are commonly performed in Australia for knee pain in older patients. Most patients have degenerative knee disease (i.e. osteoarthritis). High quality RCT data has been emerging for many years suggesting that knee arthroscopies are no better than placebo in improving function and pain beyond six months.

It has been shown that knee arthroscopies are no better than placebo for:

1. OA,
2. OA with degenerative (the vast proportion of) meniscal tears,
3. Degenerative meniscal tears without OA, and more recently,
4. OA and meniscal tears with mechanical symptoms.

This fourth point was first examined just last year and came as quite a surprise, challenging the assumption that mechanical symptoms was a 'no brainer' indication for referral for arthroscopy, as catching or locking was believed to result from a mechanical blocking mechanism in the knee.

Trial evidence

Looking at mechanical symptoms, Sihvonen (2016) and his Osteoarthritis Research Society International (OARSI) colleagues studied patients from one public hospital referral centre during 2007-2011 with non-traumatic onset of symptoms and having OA and a meniscal tear. 328 of 932 patients had mechanical symptoms pre-surgery. Mechanical symptoms were assessed using the self-reported Lysholm knee score: (1) no locking or catching, (2) catching sensations but no locking, (3) occasional locking, (4) frequent locking, or (5) locked at present. Those reporting no mechanical symptoms (response 1) were compared to those reporting mechanical symptoms (scores 2-5).

The proportion of patients satisfied with their knee 12 months after arthroscopy was significantly lower among those with preoperative mechanical symptoms (61%) than among those without (75%), and similarly improvement was also lower in the mechanical group. There was no difference found in quality of life or pain. Of those with preoperative mechanical symptoms, 47% reported persistent symptoms at 12 months postoperatively.

So does anyone with a degenerative knee benefit from arthroscopy? Maybe a smaller subset of more significant mechanical symptoms? Well, perhaps, but there has been no research studying only locking or severe catching, or some other subset of mechanical symptoms. And if there are indeed some patients who benefit from arthroscopic debridement, we have no way of knowing preoperatively who they are.

Therefore, don't think of arthroscopy as first line management, and imaging is mostly not required.

So what instead?

There is good evidence for the efficacy of weight loss, aerobic exercise, strength exercises, and adjuncts such as NSAIDs, appropriate analgesics, cortisone injections for short term relief and hyaluronic acid injection for medium term relief. Knee replacement surgery is indicated when conservative measures fail. Patient-centred individualised care should be offered, acknowledging that comorbidities are often present. ●

Author competing interests: No relevant disclosures. Questions?
Contact the author on activesportsmedicine@gmail.com



PIVET MEDICAL CENTRE



SPECIALISTS IN REPRODUCTIVE
MEDICINE & GYNAECOLOGICAL SERVICES

by Medical Director
PROF JOHN YOVICH

ESHRE Conference Highlights 2017 ... presented in Geneva, home to the WHO

The two most advanced ideas in Reproductive Medicine were delivered in keynote presentations at the European Society of Human Reproduction and Embryology, now the most respected international forum:

Carlos Simon (Valencia, Spain) described autologous cell therapy with CD133+ bone marrow-derived stem cells for refractory Asherman's syndrome. This condition, relatively rare in my training days, has become increasingly common with intra-uterine adhesions and endometrial atrophy resulting in menstrual disorders along with infertility. The background is usually of repeated, possibly "over-zealous" D&C procedures and associated inflammatory conditions.

Hysteroscopic surgery can enable lysis of intra-uterine adhesions in some cases but persistent endometrial atrophy prevails in the majority. In the Valencia pilot study, CD133+ stem cells were isolated through peripheral blood apheresis with around 200 million cells injected into the uterine spiral arteries via femoral artery catheterisation.

All 11 cases showed improved uterine cavity and endometrial thickness at two months follow-up; three patients conceived spontaneously; and 7 achieved pregnancy by IVF and embryo transfer procedures. This novel autologous stem-cell therapy is a promising option with ethical challenges before consideration in Australia.

Denis Lo (Chinese University, Hong Kong), who introduced the world to non-invasive prenatal testing (NIPT), has been exploring the limits of this technology by sequencing the plasma of pregnant women to 270X haploid genome coverage. By using such a depth of sequencing and a custom-built bio-informatics pipeline, he has been able to detect fetal de-novo mutations on a genome wide level to a sensitivity of 85% and a positive predictive value of 74%. He also discovered "preferred DNA ends" to determine if the sample is of fetal vs maternal origin (without relying on the current DNA polymorphisms). Such second-generation fetal genomics from maternal blood enables a very exciting diagnostic future.



Monument outside the WHO HQ in Geneva, dedicated to the Smallpox Eradication Program through vaccinations 1966-1980.

NOW AT 2 LOCATIONS

PERTH & BUNBURY

For ALL appts/queries: **T** 9422 5400 **F** 9382 4576
E info@pivot.com.au **W** www.pivot.com.au