NICE appraisal of Autologous Chodrocyte Implantation

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On behalf of BASK

Points to make for the Appraisal of ACI

1. I have attached a DRAFT copy of the UK Articular Cartilage Consensus Paper. This has been drafted by the designated surgeons and is in circulation for comments and ratification by the other signaturies. Please note that this is NOT the final copy for submission and may be amended prior to submission. It is submitted to NICE in academic confidence of no further circulation. We anticipate submission to The Bone and Joint Journal at the end of September with an early publication date request. I concur with the paper consensus statements

2. Key new references that should be taken into account for this appraisal:

   Long-term Results of Autologous Chondrocyte Implantation in the Knee for Chronic Chrondral and Osteochondral Defects.
   Biant LC, Bentley G, Vijayan S, Skinner JA, Carrington RW.
   Am J Sports Med. 2014 Jul 7. pii: 0363546514539345. [Epub ahead of print]
   Autologous chondrocyte implantation in the patella: a multicenter experience.
   Gomoll AH, Gillogly SD, Cole BJ, Farr J, Arnold R, Hussey K, Minas T.
   Am J Sports Med. 2014 May;42(5):1074-81. doi: 10.1177/0363546514523927. Epub 2014 Mar 4.
   The John Insall Award: A minimum 10-year outcome study of autologous chondrocyte implantation.
   Minas T, Von Keudell A, Bryant T, Gomoll AH.
   Clin Orthop Relat Res. 2014 Jan;472(1):41-51.
   Autologous chondrocyte implantation for joint preservation in patients with early osteoarthritis.
   Minas T, Gomoll AH, Solhpour S, Rosenberger R, Probst C, Bryant T.
   Clin Orthop Relat Res. 2010 Jan;468(1):147-57. doi: 10.1007/s11999-009-0998-0. Epub 2009 Aug 4.
   Increased failure rate of autologous chondrocyte implantation after previous treatment with marrow stimulation techniques.
   Minas T, Gomoll AH, Rosenberger R, Royce RO, Bryant T.
   Am J Sports Med. 2009 May;37(5):902-8. doi: 10.1177/0363546508330137. Epub 2009 Mar 4.

Minimum ten-year results of a prospective randomised study of autologous chondrocyte implantation versus mosaicplasty for symptomatic articular cartilage lesions of the knee.
Bentley G, Biant LC, Vijayan S, Macmull S, Skinner JA, Carrington RW. J Bone Joint Surg Br. 2012 Apr;94(4):504-9. doi: 10.1302/0301-620X.94B4.27495.
Matrix-Applied Characterized Autologous Cultured Chondrocytes Versus Microfracture: Two-Year Follow-up of a Prospective Randomized Trial.
Saris D, Price A, Widuchowski W, Bertrand-Marchand M, Caron J, Drogset JO, Emans P, Podskubka A, Tsuchida A, Kili S, Levine D, Brittberg M; on behalf of the SUMMIT study group. Am J Sports Med. 2014 Apr 8;42(6):1384-1394. [Epub ahead of print]

3. Consider Lutianov et al J Theor Biol 2011:289;136-150

4. When referring to size of the defect in terms of treatment options, it is important to consider the size of the defect in relation to size of the knee. A 2cm diameter defect may be almost a half condyle width in a small knee

5. With regard to comparators: osteotomy and total knee replacement are not comparators. Only microfracture and mosaicplasty are surgical comparators

6. The majority of RCTs are on condyle defects as there are easier to recruit as a standard group. Patella evidence is emerging in cohort studies. The Biant 2014 study in Am J Sp Med did a subgroup analysis of patella lesions and found them to be performing equally as well as condyle defects. Early series by Brittberg suggest that patella lesions improved significantly, but not quite to the same degree as condyle lesions. Mosaicplasty and microfracture perform poorly on the patella