Arthroscopic repair of delaminated acetabular articular cartilage using a combination of microfracture and fibrin adhesive. Results at one to three years.

Authors: Stafford G., Bunn J., Villar R.N.

Publication Date: 2012

Abstract:

SUMMARY Fibrin adhesive is shown to be a safe and effective method of addressing acetabular chondral delamination DATA Introduction: The aim of this paper is to describe oneto three-year results of a novel use of fibrin glue in the treatment of cartilage damage by arthroscopy in the hip. Methods: This arthroscopic technique uses the microfracture technique to create a blood and marrow clot beneath delaminated acetabular cartilage, and then fibrin adhesive to bond the delaminated articular cartilage to the underlying subchondral bone. This is usually done in conjunction with treatment of underlying pathology such as femoroacetabular impingement. Patients were assessed using the modified Harris Hip Score (MHHS) preand post-operatively, and statistical significance determined by the Student's t-test. We report the mid-term results of 43 patients with femoroacetabular impingement who have undergone this technique for re-attachment of delaminated chondral flaps. Results: We demonstrate statistically significant improvements in patients' MHHS at a mean of 28 months (16 to 42 months) after surgery ($p < 0.0001$). The MHHS for pain significantly improved from 21.8 (95% CI 19.0 to 24.7) pre-operatively to 35.8 (95% CI 32.6 to 38.9) post-operatively ($p < 0.0001$). The MHHS for function also showed significant, although more modest, improvements from 40.0 (95% CI 37.7 to 42.3) preoperatively to 43.6 (95% CI 41.4 to 45.8) post-operatively ($p = 0.0006$). There were three patients who had early (within 12 months of the index procedure) revision arthroscopy for iliopsoas pathology. Conclusions: Our results indicate that this technique may be suitable for anatomical repair of delaminated acetabular cartilage,

demonstrated by improved pain and functional scores as well as arthroscopic assessment. We conclude that this is a valuable hip arthroscopic technique in the treatment of early cartilage damage, although further studies would be useful.