

Radiofrequency Electrothermal Shrinkage of Symptomatic Anterior Cruciate Ligament Instability

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Introduction

The purpose of this study was to evaluate the usefulness of shrinkage with radiofrequency energy in knee instability caused by partial anterior cruciate ligament injury and to analyze treatment result.

Material and Methods

Eleven cases of partial anterior cruciate ligament (ACL) injury were surgically treated with radiofrequency energy from april, 2003 to July, 2004 and followed for an average 6.5 months (range, 1 to 15 months). (Preoperative physical examination, MRI and histologic finding were compared with postoperative ones). Fifteen to twenty percentage shortening with arthroscopic ACL shrinkage were performed using radiofrequency energy under 60 degree celsius.

Result

Knee joint stability was obtained in 8 cases among 9 cases whose laxity were under 10 months and other 1 case whose laxity was severe and 2 cases whose laxity were over 2 years felt subjective knee joint stability but they showed knee instability in physical examination. Histologically, the interval of collagen fiber was shortened and there existed no cell necrosis postoperative MRI showed no signal change and clear around the ACL and shortening.

Conclusion

Radiofrequency shrinkage was useful treatment in acute partial ant. cruciate ligament injury with moderate ligament laxity.

Key word: Anterior cruciate ligament injury, Shrinkage, Radiofrequency energy