The technique of ultrasound-guided arthroscopic surgery for refractory chronic patellar tendinopathy

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The main treatment for patellar tendinopathy is conservative therapy, but surgical treatment is considered for refractory chronic patellar tendinopathy. Open and arthroscopic surgery for patellar tendinopathy has been reported, but standard surgical techniques have not yet been established.

Arthroscopic surgery has been reported to facilitate early return to sport, but it is difficult to identify the lesion and determine the extent of resection based on arthroscopic findings alone. We propose to combine arthroscopic surgery with ultrasound guidance to increase its effectiveness.

In the video we present a case study. The patient is a 17-year-old male. His main complaint was right knee pain. He played baseball. After 9 months of conservative treatment, his pain did not improve, so he underwent surgery.

Sagittal MRI showed thickening and hyperintensity changes in the patellar tendon.

Ultrasonography showed thickening and hypoechoic changes in the patellar tendon, and the fibrotic pattern had disappeared.

Blood flow around the lesion was also increased.

An ultrasound device can be used to confirm the extent of the lesion during surgery. The ultrasound device uses both the long- and short-axis views to determine the resection site. Abnormal lesions were resected while checking the position of the device.

Weight-bearing and range-of-motion exercises were allowed from the first postoperative day, depending on the level of pain. Two months after the surgery, there was some limitation of movement due to pain, so injection therapy was added. The patient returned to sport 3 months after surgery and was able to compete without restrictions. He retired from club

activities 10 months after surgery and has been pain free on a daily basis ever since. Eighteen months after the operation, the patient has not experienced much pain during exercise since entering university.

The VISA-P score, which indicates the degree of patellar tendinopathy, improved significantly from preoperatively 36 to postoperatively 97.

Seven similar cases were treated using this technique. Seven similar cases were treated using this technique, Six were male and one female, with a mean age of 17.7 years and a mean conservative treatment period of 7.9 months.

All patients were able to return to sport, with a mean time to return to sport of 4.6 months. Only one patient remained in pain, but the pain improved after a mean of 7.8 months.

VISA-P scores improved significantly from a mean of 36.6 preoperatively to a mean of 90.4 postoperatively.