Mid-Term Outcome of Endoscopic Proximal Hamstring Repairs

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Background

Endoscopic hamstring repair has emerged as a minimally invasive alternative to open hamstring repair techniques for both partial and full thickness hamstring tears. Previously, the open approach to hamstring surgical repair has shown concerning complication rates (23%). Short-term follow-up of endoscopic repair has demonstrated low complication rates (3%), high patient satisfaction (90%), and complete resolution of pain in 73.3% of patients, but more data is needed on mid and long-term follow-up.

Goal

To evaluate mid-term follow up of proximal hamstring tears treated with endoscopic repair. Outcomes of interest include patient satisfaction, function, and overall pain.

Methods

A retrospective study design was performed for mid-term follow up of a previous study assessing short term outcomes of endoscopic proximal hamstring repair. Surgeries were performed from 2012-2019 by a senior fellowship trained sports medicine orthopedic surgeon. 29 patients were included in this original short-term study. Patients were again contacted and given the option of completing the questionnaires over the phone or electronically on REDCap after consent. The questionnaires included modified Harris Hip Score (mHHS), the Hip Outcome (HOS), Sports Subscale (HOS-SSS), the SANE, Hip related quality of life (iHOT), VAS pain scale, as well as satisfaction with the surgery. Descriptive statistics including mean and variance were used to analyze the results and compare values from the short-term follow up to the current midpoint follow up.

Results

Twenty of 29 (69%) participants completed the study (90% female, average age 62.8, SD 14.4). Follow up time ranged from 6.3 to 8.9 years (mean 7.5, SD 0.83). Subjects reported a mean VAS pain scale 1.6 (SD 2.4). Eleven subjects reported a mean HOS-SSS of 88.5 (SD 15.5).

Results

Figure 1. CONSORT flow diagram

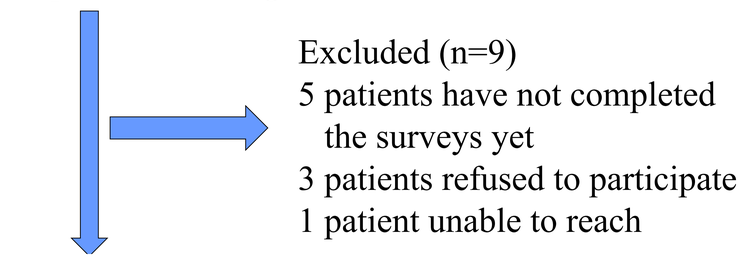

Table 1. Patient Demographics (N= 20)

	Mean/N	(SD, range) or N%
Age, years	62.8	(14.4, 28-85)
Sex (female)	18	(90%)
Body mass index	25.9	(5.3, 18.53-36.2)
Laterality (right)	11	(55%)
Sports (Recreational)	11	(55%)*

SD, standard deviation
*Running (5), exercise classes (1), softball (1), Personal trainer (2), gym teacher (1), N/A (1)

Table 2. Postoperative Patient Reported Outcomes

Instrument		Mean (SD, Range) or % (n)
iHOT-12	short term (n= 18)	81 (21.2, 31.7-100)
	midterm (n=19)	80.8 (23.1, 32.5-100)
SANE	short term (n= 18)	77.7% (20.2, 30-100)
	midterm (n=20)	80.7% (21.5, 30-100)
mHHS	short term (n=18)	89.8 (15.1, 47.3-100)
	midterm (n= 20)	83.1 (17.8, 46.2-100)
HOS	short term (n= 18)	88 (15, 54.4-100)
	midterm (n= 20)	82.8 (20.6, 33.8-100)

Results

As seen at the short term, 90% of the participants were satisfied with the results; however, 2 participants flipped from their feeling at the short term, with a previously dissatisfied now content and one previously content no longer satisfied.

Sixteen of 19 (84%) participants surpassed the previously published patient acceptable symptomatic state (PASS) (score 59.6) for the iHOT-12.

Conclusion

Endoscopic hamstring repair remains efficacious with high patient satisfaction (90%) and patient reported outcome scores (84% reaching acceptable symptom state) at mid-term follow-up.

Limitations

Limitations include an overall small sample size (n=29) with possible non-responder bias.

Next Steps

Next steps would be to conduct a long-term study evaluating outcomes from endoscopic proximal hamstring repair with a larger sample size.

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