The effects of unilateral gastrocsoleus recession

References:


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Abstract: BACKGROUND: Gastrocsoleus recession is commonly performed to correct equinus contracture of the ankle that may accompany foot and ankle disease in adults. There is concern that mechanical lengthening of the myotendinous unit causes permanent weakness and disability. This retrospective study reviewed the short-term and long-term objective and subjective results of patients who have had this procedure to determine if it is an appropriate adjunct to corrective foot surgery.

METHODS: Forty patients who had unilateral gastrocsoleus recession either as an isolated procedure or in conjunction with other surgeries were available for evaluation at an average 25.3 (range 6 to 50) months. Followup evaluation included the AOFAS ankle hindfoot score, subjective questionnaire, and physical examination. Preoperative and postoperative ranges of motion were compared. Mechanical strength testing was done using the contralateral extremity as a control. Maximal strength was measured by peak torque using a Cybex device (CYBEX International, Inc., Ronkonkoma, New York). Fatigue resistance was measured by comparing the maximal number of toe raises between the operative and nonoperative sides.

RESULTS: Range of motion improved from -3.5 to 15.3 degrees average dorsiflexion. Subjectively, two patients reported pain at the operative site, and one patient reported moderate weakness. The AOFAS score improved from 62.3 to 79.5. Strength testing of plantarflexion peak torque found the operative extremity to be 74% of the contralateral leg at followup. Peak torque improved from an average of 62.6% at 6 to 18 months to 82.2% after 18 months compared to the contralateral extremity. Fatigue resistance improved from 37.6% to 50.3% at 18 months. Two patients reported paresthesias in the sural nerve distribution.

CONCLUSION: Gastrocsoleus recession is an effective procedure to correct equinus contracture either as an isolated procedure or as an adjunct to other foot surgery. While both fatigue resistance and strength decreased initially, both demonstrated improvement over time. Four patients had subjective complaints after the procedure.