Dynamic Chiropractic

MUSCULOSKELETAL PAIN

Can Early Movement Prevent Surgery?

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There still is a debate as to whether surgery is necessary for an acute closed rupture of the Achilles tendon.[1,2] Many studies comparing surgery and nonsurgery for Achilles tendon rupture have shown greater benefits for patients undergoing surgery. One significant difference as to why the surgical patients responded better was that they exercised earlier than the nonsurgical patients. The surgical patients were given early motion and were restricted from excessive dorsiflexion, while most nonsurgical cases were put in cast immobilization. Twaddle, et al.,[2] hypothesized that if the nonsurgical cases also were exposed to controlled early motion, they would respond as well as the surgical cases. There is no question that movement, exercises and mechanical load result in tissue healing, while lack of movement results in atrophy and tissue shortening.

Weber, et al.,[1] treated 23 patients with an equinus ankle cast and boot, and compared outcomes with a group of 24 patients previously treated operatively. Muscle strengthening and walking with full weight-bearing were initiated as soon as tolerated in both groups. Follow-up examinations were performed for 18 non-operatively-treated patients after 23 months and for 15 operatively-treated patients after 49 months. They found that results of operative and non-operative treatment were equivalent. For patients to qualify for nonoperative treatment, the prone patient's ankle was passively brought into 20 degrees of plantar flexion. Approximation of the tendon stumps in this position had to be complete or near complete (less than 5 mm) on digital palpation and was verified ultrasonographically. The patients then received an ankle dressing with a semi-rigid casting tape in 20 degrees of ankle plantar flexion. The cast material was allowed to bind with the patient standing on a 20-degree wedge, fully weight-bearing. The patient was then fitted with an ankle boot with a built-in 1 cm heel lift and a rocker-bottom sole. (For further information about the boot and treatment, please refer to the article.[1])

Costa, et al.,[3] found that with immediate weight-bearing as soon as possible there was no evidence of tendon lengthening or a higher re-rupture rate. The nonoperated patients showed early healing when tested in the prone position with the foot off the edge of the table. There was no longer a palpable defect in the tendon, and the spontaneously plantar flexed position of the foot indicated an early restoration of continuity between the calf and the calcaneous and showed strength by a positive, active isometric contraction and a normal calf-pinch test (causing ankle dorsiflexion).[1]

Early motion benefits most areas of the body. When a patient asks what they can do regarding almost any musculoskeletal pain, it usually pays to encourage any type of painless motion. "No pain equals gain" is an excellent approach, although there is recent evidence that painful eccentric exercise for Achilles and elbow tendinopathy can be beneficial.[4,5]

References

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