

# The Anchor Suture Technique for Mid- substance Muscle Repair: A biomechanical assessment of suture pullout strength

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**Abstract:** Treatment of muscle lacerations remains a problem for orthopedic surgeons. Inadequate repair of lacerations cause severe disability. To date, there is no consensus on the method of repair for these injuries. The authors have previously described a successful technique of repairing midsubstance lacerations. In the present study, we used a porcine cadaver model to determine the ultimate strength of intact muscles, followed by an assessment of suture pullout strength of muscles that were repaired by one of two techniques, the anchor suture (AS) technique and the modified kessler (MK) technique. The anchor suture technique was found to have both higher strain and nearly twice the ultimate pullout strength compared to the kessler repair group. The authors suggest this as a viable technique for midsubstance muscle repairs.