CADAVERIC ANALYSIS OF ROTATOR CUFF TEAR PREVALENCE IN PHYSICALLY ACTIVE AGE GROUP(20-50 YEARS)

ABSTRACT

Background: Significant pathology in rotator cuff can occur over a wide range of age from teenage to nineties and involves a wide range of pathology from minimal inflammation to full thickness tear. The true incidence of rotator cuff tears is unknown. Most of the information is from cadaver studies, which reflect an older population; the true incidence in younger population is unknown. There is a discrepancy between cadaver and clinical studies because intratendinous tears are more difficult to diagnose with arthroscopy, MRI, or ultrasound than are bursal-sided or articular-sided tears. So we studied the RCT prevalence in 20-50 years in cadavers.

Materials and methods: Rotator cuff muscles (supraspinatus and infraspinatus) were dissected from fresh cadavers of both sexes, on both sides excluding those with soft tissue or bony injuries in the upper limb, regardless of the cause of death. 100 rotator cuff specimens were dissected from 54 cadavers with age at death between 20 to 50 years (mean age - 33.7 years) and were studied macroscopically and microscopically and analysed the age prevalence categorized under 20-30, 30-40 and 40-50, sex prevalence, prevalence of full thickness and partial thickness tear, % of microscopic and macroscopic tear, prevalence in occupation requiring overhead activities, bilaterality and hooked acromion.

Results: Overall prevalence of RCT in cadaveric population as per our study was found to be 14.8% with 7.69%, 14.28% and 28.57% in 20-30, 31-40 and 41-50 years population with all being partial thickness tear. Bursal sided PTT (7.40%) are more common than the articular PTT (5.56%) and interstitial PTT (1.85%). 6 subjects had tear bilaterally (100%) and none of them had unilateral tear. The prevalence of hooked acromion in our study population is 1.85% and was associated with bursal sided PTT.

Conclusion: The prevalence of RCT increases with the age suggesting age related degeneration in the pathogenesis of rotator cuff tear. Hooked acromion had a strong association in development of bursal tear by external impingement. As there is strong evidence of bilateral presence of rotator cuff tear it is important to screen the asymptomatic contralateral shoulder in patients with rotator cuff tear.

Keywords: PARTIAL THICKNESS TEAR, HOOKED ACROMION, ARTICULAR, BURSAL, INTERSTITIAL TEAR