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Abridged abstracts from the surgical literature

Complex extensor tendon injuries: early active motion following single-stage reconstruction

Koul AR, Patil RK, Philip V. *J Hand Surg Eur* Vol. 2008 Dec;33(6):753-9.

Introduction: This study presents a retrospective evaluation of patients managed with single-stage repair following complex extensor tendon injuries.

Patients and methods: Over a 2-year period, 21 extensor tendons were reconstructed in 18 patients with complex hand injuries in zones V–VII. All eight patients needed soft tissue cover. Active mobilisation was started in the first week.

Results: Total active motion (TAM) at 4 weeks was a mean of 159° (SD 21.57) and at 6 weeks it was 202.6° (SD 13.26). Average TAM at 8 weeks was 223.8° (SD 16.46) and 249.5° (SD 14.38) at 12 weeks. Grip strength at 12 weeks and 6 months was around 75% and 90% of the contralateral normal hand in most of the patients.

Conclusions: Single-stage reconstruction of complex extensor tendon injuries seems to reduce morbidity in terms of hospitalisation, and reduced cost of treatment. It also helps to achieve better functional outcome in the early postoperative period.

Abstractor's comments

Restoration of function following a complex hand injury is a challenge in surgical practice. Traditionally, skin grafts were performed after the defect was filled with granulation tissue

with immobilization of the hand for a few weeks to protect the tendon repair or the skin graft. Early reconstruction of extensor tendons with soft tissue cover is the mainstay of treatment. Delay in surgical intervention causes desiccation and necrosis of the extensor tendons resulting in loss of finger extension. The granulation tissue formed will be replaced by fibrous tissue later. Scar tissue could interfere with mobility of the fingers and hand function.

*This study highlights the importance of early reconstruction of extensor tendons, flap cover and early mobilization on the functional outcome. **Thushan Beneragama; MS, FRCS***

Cardiovascular Risk Factors and Morbidity in Long-Term Survivors of Testicular Cancer: A 20-Year Follow-Up Study

H. S. Haugnes, T. Wethal, N. Aass, O. Dahl, O. Klepp, C. W. Langberg, T. Wilsgaard, R. M. Bremnes and S. D. Fossa. *J Clin Oncol* 2010; 28: 4649–4657.

Purpose: To evaluate the prevalence of cardiovascular risk factors and long-term incidence of cardiovascular disease (CVD) in survivors of testicular cancer (TC).

Methods: Overall, 990 men treated for unilateral TC (1980 to 1994), were included in this national follow-up study (2007 to 2008). They were categorized into four treatment groups: surgery (n = 206), radiotherapy only (RT; n = 386), chemotherapy only (n = 364), and combined RT/chemotherapy (n = 34). Age-matched male controls from the general population (ie, NORMs) were included (n = 990). Survivors of TC who were diagnosed with CVD before or within 2 years after the TC diagnosis were excluded from analyses of CVD end points.

Results: Median observation time was 19 years (range, 13 to 28 years). All cytotoxic treatment groups had significantly increased prevalences of antihypertensive medication, and survivors in the RT and RT/chemotherapy groups had higher prevalences of diabetes (RT: odds ratio [OR], 2.3; 95% CI, 1.5 to 3.7; RT/chemotherapy: OR, 3.9; 95% CI, 1.4 to 10.9) compared with NORMs. Overall 74 survivors of TC (8.0%) experienced atherosclerotic disease during follow-up. Increased risks for atherosclerotic disease were observed in age-adjusted Cox regression analyses after any cytotoxic treatment when compared with surgery only (RT: hazard ratio [HR], 2.3; 95% CI, 1.04 to 5.3; chemotherapy: HR, 2.6; 95% CI, 1.1 to 5.9; RT/chemotherapy: HR, 4.8; 95% CI, 1.6 to 14.4). Treatment with cisplatin, bleomycin, and etoposide (BEP) alone had a 5.7-fold higher risk (95% CI, 1.9 to 17.1 fold) for coronary artery disease compared with surgery only and a 3.1-fold higher risk (95% CI, 1.2 to 7.7 fold) for myocardial infarction compared with NORMs.

Conclusions: Treatment with infradiaphragmatic RT and/or cisplatin-based chemotherapy, particularly the BEP regimen, increases the long-term risk for CVD in survivors of TC.

Abstractor's comments

While the short term effects of especially chemotherapy are well known, the long term effects are currently being evaluated with studies carried out in survivors of malignant diseases. Testicular cancer is one such condition in which, due to the excellent survival figures, such morbidities have the potential to cause deleterious effects in patients. Increased risks of cardiovascular disease, diabetes and hypertension in those receiving chemotherapy and / or radiotherapy are documented by Haugnes et al in this long term follow up study. These will become a consideration for patients when discussing treatment options. Ajith Malalasekera; MS, MRCS

Increased incidence of negative appendectomy in childhood obesity

Kutasy B, Hunziker M, Laxamanadass G, Puri P. *Pediatr Surg Int.* 2010 Oct;26(10):959-62.

Background: In recent years, there has been worldwide increase in childhood obesity. The diagnosis of acute appendicitis in very obese children can sometimes be difficult and challenging. The purpose of this study was to determine the incidence of histologically normal appendix in very obese and non-obese children undergoing emergency appendectomy for the clinical diagnosis of acute appendicitis.

Patients and Methods: The hospital records of 1,228 consecutive patients, who underwent appendectomy for acute appendicitis between 2000 and 2008, were analyzed. 207 children (16.9%) were very obese. Very obese was defined as greater than 2 standard deviations above the standardized mean weight for age. Histological data was compared between very obese and non-obese children. Seventy-seven (37%) of 207 very obese and 398 (39%) of 1,021 non-obese children had ultrasound preoperatively.

Results: The incidence of normal appendectomy was significantly higher in very obese children compared to non-obese children (24.6 vs. 9.9%, $P < 0.001$). The false positive rate of ultrasound was significantly higher in very obese children group compared to non-obese (26 vs. 6%, $P < 0.05$). The specificity, sensitivity, positive and negative predictive values of ultrasound were significantly lower ($P < 0.05$) in very obese children group compared to non-obese children.

Conclusion: Suspected appendicitis in childhood obesity is associated with increased incidence of normal appendectomy. Active observation in hospital in very obese children may reduce the rate of normal appendectomy without increasing the incidence of complicated appendicitis.

Abstractor's comments

This large series of 1228 patients from Dublin convincingly demonstrates that the negative

appendectomy rate is significantly higher (24.6 vs. 9.9%, $P < 0.001$) in obese children clinically diagnosed to have acute appendicitis. Abdominal ultrasonography was also less reliable in the diagnosis of appendicitis in the obese child. The authors suggest that a period of active observation in hospital may reduce the rate of normal appendectomy in very obese children without increasing the incidence of

*complicated appendicitis. Obesity is being increasingly seen among Sri Lankan urban children and this study highlights the importance of developing cost-effective methods to increase the accuracy of diagnosing acute appendicitis in the very obese child. Further studies to prove the safety of a period of active observation in hospital are required. **Malik Samarasinghe; MS, FRCS***
