Audit of Muscle Sampling in Trans-Urethral Resection of Bladder Tumour

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Background: Trans-Urethral Resection of Bladder Tumours (TURBT) should sample Detrusor Muscle (DM) in order to be able to accurately tumour staging. Presence of DM is an accepted marker of the quality of tumour resection. However, it is widely reported that DM may not be sampled in up to 50% of first resections. Previous studies have suggested a correlation between surgeon experience and presence of DM in resection sample.

Aim: To evaluate all loop resections of bladder lesions within a one year period and identify the rate at which DM is sampled in TURBT at Peterborough City Hospital. To evaluate whether tumour grade or stage is associated with the presence or absence of DM. To evaluate whether the experience/level of the operating surgeon is associated with a higher chance of DM not being sampled.

Method: Electronic Records of In-patient stays between December 2012 and November 2013 were used to identify all patients undergoing elective and emergency loop resection TURBT. 137 TURBT procedures were identified and the histopathology report for each procedure was examined. Operation notes were sought for each procedure.

Results: DM was not sampled in 25% (n=35) of TURBT. The most frequently noted histological staging in cases where DM was not sampled was pTa (75% , n=27), accounting for 35% of all pTa tumours. Of the cases where DM was not sampled; only one case was carried out by a Consultant and others were carried out by Specialist Registrars and Staff grade Surgeons. The author (ST3 level SpR) had a rate of DM sampling of 48% (compared with overall rate of 75% within the department).

Conclusions: From this limited sample size there is a strong indication that surgical experience is a factor in the quality of TURBT. The data would also suggests that extra care should be taken in the resection of superficial looking tumours to ensure that muscle is sampled and accurate staging is achieved.