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Reducing adverse outcomes following local anaesthetic trans-perineal prostate biopsies

S. Moshtael [1], M. Johnston [1], G. Crowther [1], J. Brewin [1]

(1) Department of Urology, Salisbury NHS Foundation Trust, BSW Hospitals Group, Salisbury, UK - United Kingdom

Objective
Patients undergoing local anaesthetic trans-perineal prostate biopsies (LATPBx) experienced high rates of vasovagal syncope requiring prolonged observation and increased Surgical Assessment Unit (SAU) admissions. We conducted a two-cycle Quality Improvement Project (QIP) to identify contributing factors and develop an intervention. We hypothesised that patients taking tamsulosin and anti-hypertensives will have higher vasovagal event rates.

Methods
1st cycle: Clinical data from all men undergoing LATPBx between 25th June and 30th July 2025 were retrospectively evaluated by reviewing electronic and paper medical notes. Biopsies were performed using the PrecisionPoint™ Transperinal Access System.
Intervention: To reduce intra-clinician variability all clinicians were required to wait five minutes between anaesthetic administration and biopsy. Nursing staff were asked to wait five minutes before sitting patients up. Patients were instructed to omit Tamsulosin for 24hrs prior to biopsy. 2nd cycle: Following intervention all men undergoing biopsies between 1st November to 1st January 2026 were evaluated.

Results
During the 1st cycle, 44 men underwent LATPBx; five required SAU admission and four required extended observation (20.5%, 95% CI:11.2-34.5%). 88% of patients who experienced an adverse event were taking anti-hypertensives versus 52% of the remaining cohort (95% CI:11.1-63.8%; P=0.058). There was no other correlation with medications (including Tamsulosin) or co-morbidities.

In the second cycle, one SAU admission occurred out of 62 LATPBx (1.6%, 95% CI:0.3-8.6%) and no patients required extended observation alone. This was significantly different from the rates of observation or admission from the 1st cohort and represents an absolute reduction of 18.8%. (95% CI:6.5-31.2%; p=0.004).

Conclusions

Following our intervention, fewer patients experienced vasovagal syncope and fewer patients required extended observation and admissions. We noticed an association between the use of anti-hypertensives and vasovagal episodes. Although this did not reach statistical significance, the confidence interval suggests a clinically meaningful effect warranting extra care in these patients. With small numbers of patients in this QIP, other factors may have contributed to the variability in vasovagal events, so prospective monitoring occurs now and future cycles should span a longer timeframe to include more patients.

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