

THE RISK AND CLINICAL CONSEQUENCE OF ELEVATED CREATINE PHOSPHOKINASE AFTER PROLONGED EXAGGERATED LITHOTOMY POSITION FOR URETHROPLASTY

Hypothesis / aims of study

Concern exists about the risks of high or exaggerated lithotomy position. We evaluated the risk factors for elevated creatine phosphokinase (CPK) and rhabdomyolysis, and clinical outcomes in patients who were positioned in a prolonged exaggerated lithotomy position for urethral reconstruction.

Study design, materials and methods

This is a prospective multivariate analysis of men who underwent urethral reconstruction from 2008 to 2010 and were in an exaggerated lithotomy position using candy-cane stirrups for greater than 3 hours. Variables evaluated include type of surgery, body mass index, age, length of surgery, ASA score. Post-operatively all men were well hydrated and had CPK levels checked every 12 hours until a peak value was achieved and subsequently declined. A chemistry panel was obtained daily, urinalysis was checked for myoglobin, and patients were queried regarding any localized pain or neurologic symptoms.

Results

15 men with a median age of 47 years (range 25-77) were evaluated. 8 had excision and primary anastomosis and 7 a ventral onlay buccal mucosal graft urethroplasty with a median operative time between 239 and 331 minutes, respectively. Median BMI was 26 (range 18.3 - 38.7). Median length of repair was 3 cm (range 2-6cm). Mean peak postop CPK was 9236 (SD ±16079) and median was 949 (range 66-63539). 9/15 (60%) patients had a peak CPK of over 500 and 6/15 (40%) a peak over 2000. No patient had compartment syndrome, neurologic sequelae or clinically relevant change in serum creatinine. One patient (7%) had back pain; this resolved within 1 month of surgery. On multivariate analysis predictors of post-operative CPK levels greater than 500 was BMI (p=0.04) and younger age (p=0.01); predictors of CPK levels of greater than 2000 was BMI (p=0.004) and buccal graft repair (p=0.04). Operative time was not a significant predictor of CPK levels.

Interpretation of results

On multivariate analysis the strongest predictor of elevated CPK levels was increased BMI; operative time did not predict postoperative CPK levels.

Concluding message

Elevated CPK is common after prolonged exaggerated lithotomy position but this seems to be of little clinical consequence.

Disclosures

Funding: None. **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** Western Institutional Review Board **Helsinki:** Yes **Informed Consent:** Yes