CADAVER URETHROPLASTY-AN IDEAL TRAINING TOOL?

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INTRODUCTION

➢ Single-stage urethroplasty has been the most commonly used technique in the last decade. It can be a very demanding and skill-based surgery.

➢ For better understanding of applied anatomy and dissection, the human cadaver will possibly remain the "gold standard" simulation tool available to teach and assess surgical skills to trainee urologists.

➢ Simulation of urethroplasty in cadavers has never been studied before in the literature.

➢ In this prospectively designed observational study we evaluated face, content and construct validity of cadavers as a simulation tool for buccal mucosa urethroplasty (BMGU).

METHODS

➢ The study participants included 18 trainees and 7 experts at the UROMET (Urology Medical Education and Training) workshop in 2019. (It's a multi-skill simulation training program focus on urology trainee, conducted annually by Urology Society of India-USI)

➢ Each trainee was allocated a single cadaver and was overseen by an expert ensuring a 1:1 mentoring ratio. All trainees and experts filled out a predesigned questionnaire after completing the procedure .

➢ All sub parameters were rated by trainnes and experts including skin(penile and perineal),urethra, periurethral tissue and graft,which were scored for their quality, colour, consistency and orientation; as compared to live patients.

➢ At the last, each critical step of urethroplasty was also scored by both trainnes and experts.

➢ The face, content and construct validity-all three were assessed.

➢ Data was analyzed in SPSS version 21. Statistical analysis used "t" test and Mann- Whitney U test to evaluate difference between trainees and experts.

RESULTS

➢ The face validity- mean overall rating (Likert scale) for BMGU on cadavers for trainees and experts was 4.11+/- 0.47 and 4.14 +/- 0.69 respectively (p=0.49).

➢ The content validity was rated by trainees as 3.75 +/- 0.46 and by experts as 3.87 +/- 0.40 (p=0.46).

➢ The construct validity was rated by trainees as 3.95 +/- 0.48 and by experts as 3.88 +/- 0.25 (p = 0.9).

There was no difference in the scoring of the Trainee or the Experts suggesting that the experts too concurred on the whole simulation.

➢ Co-relation existed between BMGU steps with graft quality (r = 0.576) and cadaveric skin/penis/perineum parameters (r = 0.482).

➢ The consistency of the buccal mucosa graft in comparison to live patients received a higher rating by Experts as compared to Trainees (4.57 vs 3.77) (p = 0.01). This was the only significant difference observed as shown in the figure.
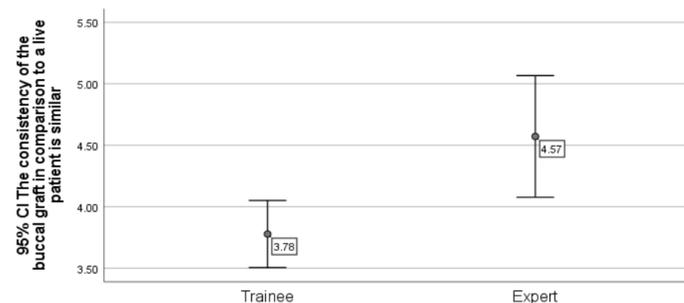
CONCLUSIONS

➢ Both trainees and experts in our study felt that the cadaver simulation urethroplasty was close to the actual procedure.

➢ Having found no similar training attempts in human cadavers our validation of the training pattern suggests that cadavers are a reliable simulation tool for BMG urethroplasty. Such programs if established will improves the skill among young urologists.

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