



Proficiency based progression training versus the Halsted’s model for learning to perform a robotic vesico-urethral anastomosis on an avian tissue model: a prospective, randomized, multicenter and blinded clinical trial. Preliminary outcomes of the PROVESA trial.

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Abstract:

INTRODUCTION AND OBJECTIVES

Proficiency Based Progression (PBP) training has demonstrated effectiveness in different surgical specialties. The “Venezuelan chicken model” is an optimal training model for robotic suturing, anastomosis and knot tying tasks.

We compared the effectiveness of Halsted’s apprenticeship approach to training with the PBP approach for teaching the robotic suturing of a VUA on a chicken model.

MATERIAL AND METHODS

Robotic naïve urology (n = 12), surgery (n = 12) and gynecology (n = 12) junior residents (n = 36) were all given access to an on-line learning module where they were taught how to perform the VUA model which was objectively assessed (Baseline). All participants were then matched (for surgical specialty, age, residency year, and skill and randomly allocated to the Traditional Trained or PBP group. The PBP had to demonstrate proficiency in an assessed online curriculum. When reached the benchmark, they were trained in the skills laboratory with the PBP-methodology. The 18 participants in the traditional group were then trained by seven very experienced and recognized robotic surgery training experts using an apprenticeship model. Training for the Traditional Trained group was matched for the same training time as the PBP group. All participants completed a final VUA task which was assessed.

RESULTS

In the traditional training group, a mean of 15 (95% CI, 12 – 18) performance errors was observed versus 6 (95% CI, 5-7) in the PBP group (p<0,000). When anastomotic leak was combined with number of procedural steps not completed, the observed difference was 3 (17%) versus 9 (50%) respectively (p=0,034). Overall, 1 (6%) participant reached proficiency in the traditional group vs 15 (78%) in the PBP group (p < 0,000).

CONCLUSION

Significantly more junior, multispecialty residents reached the proficiency benchmark by implementing PBP methodology for teaching the robotic suturing of a VUA on a chicken model compared to traditional training.



Biography:

Ruben De Groot is a senior resident urology in the Onze Lieve Vrouw Hospital Aalst. In 2012 he graduated as master in specialised medicine at Ghent University magna cum laude. He has a special interest for uro-oncology and robotic surgery and is currently video-editor for Surgery in Motion School. In order to become a certified robotic surgeon he is currently engaged in the CC- ERUS Robotic Curriculum endorsed by ESU.

Publication of speakers:

- R. De Groot et al; Risk assessment, prognosis and guideline implementation in pulmonary arterial hypertension; 2017 Aug 3
- R. De Groot et al; Macitentan for the treatment of portopulmonary hypertension (PORTICO): a multicentre, randomised, double-blind, placebo-controlled, phase 4 trial; 2019 Jul 7
- R. De Groot et al; Vaccination with Necroptotic Cancer Cells Induces Efficient Anti-tumor Immunity; 2016 Apr 12
- R. De Groot et al; Screening for pulmonary arterial hypertension in patients with systemic sclerosis: clinical characteristics at diagnosis and long-term survival; 2011 Nov
- R. De Groot et al; FLNC pathogenic variants in patients with cardiomyopathies: Prevalence and genotype-phenotype correlations; 2019 Oct

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