Experience of 5 years ProACT: the surgical learning curve and patient outcomes

This study shows no significant surgical learning curve and supports broader adoption of ProACT implantations

De Zeeuw L[1], Christiaans C[1], Remmers S[1], Blok B[1], Stillebroer A[1]

[1]Erasmus University Medical Center, Rotterdam

Background

Adjustable continence therapy balloons (ProACT) have emerged as a minimally invasive treatment for post-prostatectomy incontinence. ProACT implantation is considered technically challenging and limited to high-volume medical centers, yet little is known about the surgical learning curve. This study aims to assess the learning curve to determine training requirements for ProACT implantation.

Methods

All ProACT implantations performed by one urologist were included retrospectively. Surgery success was defined as postoperative use of a maximum of one 'safety pad', less than 10 mL urine loss or over 95% subjective improvement of continence. Multivariable logistic regression assessed the learning curve.

Results

A total of 108 surgeries between 2019 and 2024 were included. No statistical relation was found between the surgeon experience until the procedure and surgical success (per 10 surgeries, OR 0.89, 95%CI = 0.75–1.07, p = 0.2). Preoperative incontinence (pads/day) was statistically significantly associated with surgery success (OR 0.65, 95%CI = 0.47–0.89, p = 0.009). The overall surgical success rate was 61%. Complication rate within six months was 21 % of which 5.6% included explantations of the ProACT device.
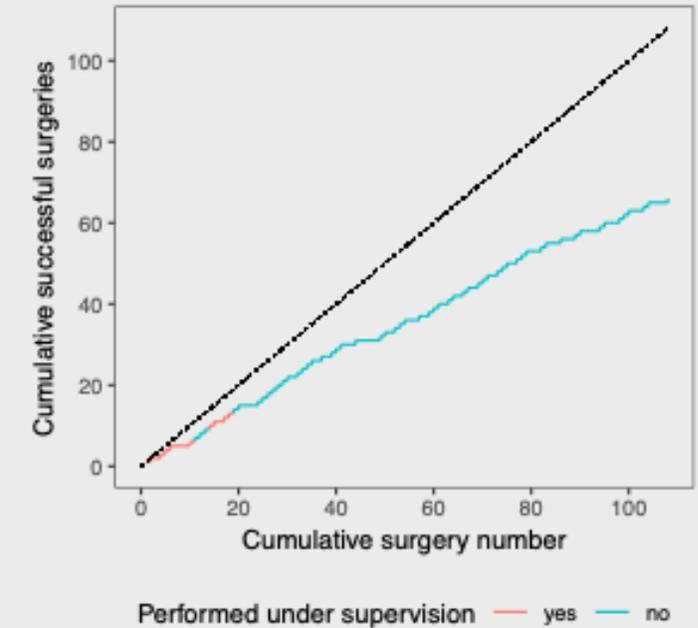
Conclusions

ProACT implantation achieves consistent outcomes after brief supervised training, with no statistically significant learning curve. This supports a broader adoption of this technique by urologists treating postprostatectomy incontinence.