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MID-URETHRAL SLING FOR FEMALE URINARY INCONTINENCE: 5-YEARS EXPERIENCE AT A GERMAN TERTIARY REFERRAL UNIVERSITY CENTER

Hypothesis / aims of study

Midurethral slings have become first-line therapy for correction of the female stress urinary incontinence (SUI) not only for the high success rate, but also because their low complications rates. Their safety and efficacy have been extensively investigated (1) but only few large trials focused on the prevalence and the management of their complications. The aim of this study is to review the experience of a tertiary referral urogynaecological university hospital, focusing on the occurrence of midurethral sling complications.

Study design, materials and methods

From our electronic records of our surgical interventions, we retrospectively rewieved all women undergoing a primary polyropylene mid-urethral sling procedure (TVT, TVT-O, minisling (TVT-secur, Mini-Arc, Ajust)) for the treatment of SUI between December 2005 and January 2011. All procedures were accomplished by the same four surgeons with high level of experience in urogynaecological surgery. The medical records of all women were analyzed: intraoperative (bladder lesions,vascular lesions, nerve injuries, bowel lesions), perioperative (retropubic hematoma, urinary tract infections (UTI)), postoperative complications (permanent urinary retention, vaginal erosion, urethral erosion, de novo urgency, tape infection, recurrent UTI), as well as the rate of complications resulting in reintervention were recorded.

Results

Six-hundred and ten women were included in our study: 502 (82%) TVT, 2 (0.3%) TVT-O, 106 (17.3%) minislings , of which 32 (5.2%) TVT-Secur, 53 (8.7%) Miniarc, 21(3.4%) Ajust. The median age was 58.49 years (31-90 years). After a mean follow-up of 12.3 months (3-38 months), 50 (8.1%) complications were found: among the intraoperative complications, 8 (1.3%) bladder injuries occurred; no vascular lesions, nerve injuries or bowel lesions have been reported. As perioperative complications, 1 (0.16%) patient had retropubic haematoma requiring laparotomy. Among the postoperative complications, 23 pts (3.7%) had voiding dysfunctions, 9 (1.4%) de novo urge incontinence, 2 (0.3%) recurrent UTIs, 5 (0.8%) vaginal erosions, 2 (0.32%) tape infections. Subsequently to persistent voiding dysfunction, 5 (0.81%) required urethral dilatation/tape loosening; 22 (3.6%) underwent a dissection or partial resection of the tape. One tape infection required surgical management. No late bladder/urethral erosion occured. The overall failure rate requiring a second anti-incontinence procedure resulted in 0.8% (5 patients) for persistent stress urinary incontinence.

Interpretation of results

In our study, the rate of bladder injuries (1.3%), retropubic hematoma (0.16%) and voiding dysfunctions (1.4%) are comparable with the rate reported in the literature (0.5-14%, 2-4.3%, 2.4-28% respectively). The vaginal erosion rate (0.32%) and the de novo urge incontinence (0.3%) were lower in comparison with the literature data (0.7-33%; 7.2%-25% respectively) (2).

Concluding message

Despite several variables have an impact on the epidemiology of midurethral sling complications, our data show that this surgical procedure can be considered safe in the hand of experienced urogynaecological surgeons.

References

1. Fong ED, Nitti VW. Mid-urethral synthetic slings for female stress urinary incontinence. BJU Int. 2010 Sep;106 (5):596-608
2. Costantini E, Lazzeri M, Porena M. Managing Complications after Midurethral Sling for Stress Urinary Incontinence. Eur Urol 2007; (5), 232-240.

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Is this a clinical trial?	**Yes**
Is this study registered in a public clinical trials registry?	**No**
Is this a Randomised Controlled Trial (RCT)?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**No**
This study did not require ethics committee approval because	**The retrospective nature of this observational study did not require ethics approval: routinely collected, anonymised data were used.**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**No**