

Evaluation of female urethral diverticulectomy in two tertiary hospitals

Mathilde W. Bos^A, Frank Martens^B, John P.F.A Heesakkers^A, Gommert A. van Koeveringe^B

^A Maastricht University Medical Centre, department of urology;
^B Radboud University Medical Centre Nijmegen, department of urology;

Background

Female urethral diverticula:

- rare phenomenon: 6-20 in 1,000,000 women [1];
- rather non-specific symptoms: recurrent urinary tract infections, dyspareunia, urethral discharge, urethral pain and/or swelling [2,3];
- often misdiagnosed or diagnosed after a long delay;
- small clinical cohorts and sparse data on surgical treatment and its outcome.

Study design, materials and methods

- Retrospective study: patient files and telephone survey;
- Inclusion criteria: female patients who underwent an excision of a urethral diverticulum, both primary diverticula and recurrences between 2011 and 2022;
- Surgery: lithotomy position, vaginal approach and urethral reconstruction if needed;
- Data collection via patient files: demography, pre-surgical presentation, concomitant diseases and complaints, surgery reports and peri-operative complications;
- Data collection via telephone survey: initial symptoms and (subjective) effect of surgery.

Aims of study

This study evaluates the clinical presentation and treatment of a urethral diverticulum and assesses the effect of a diverticulectomy on symptomatology.

Table 2: Symptoms before and after diverticulectomy and at long term

	Before (n=21)	After 6 weeks (n=21)	At long term (n=20) ¹	p-value ²
Sensation of a vaginal mass, n (%)	15 (71)	3 (14)	4 (20)	0.00
Voiding pain, n (%)	9 (43)	2 (10)	4 (20)	0.649
Sensation of residue, n (%)	2 (10)	1 (5)	8 (40)	0.008
Dyspareunia, n (%)	6 (30)	0 (0)	4 (20)	0.000
Dribble, n (%)	2 (10)	1 (5)	8 (40)	0.015
Urethral discharge, n (%)	9 (43)	2 (10)	1 (5)	0.005
Recurrent urinary tract infections, n (%)	6 (30)	1 (5)	1 (5)	0.021
Frequency symptoms, n (%)	2 (10)	2 (10)	6 (30)	0.055
Urgency symptoms, n (%)	2 (10)	6 (29)	7 (35)	0.846
Urge incontinence, n (%)	2 (10)	3 (14)	3 (15)	0.666
Stress incontinence, n (%)	2 (10)	2 (10)	9 (45)	0.015

¹ Median follow-up of 36 months (range 6-78);

² Comparison between before diverticulectomy and at long term.

Table 1: Patient characteristics at referral, n=21

Age at presentation, years, mean (SD)	43 (14)
BMI at surgery, kg/m ² , mean (SD)	28 (5)
Referring hospital department, n (%)	
GP	8 (38)
Gynaecologist	13 (62)
Years from surgery to inclusion, years, mean (SD)	3 (2)
Previous urological or gynaecological intervention	
TOT	1 (5)
Pessarium	1 (5)
Hysterectomy	2 (10)
Diverticulectomy	4 (19)

Figure 1: Main symptom at referral

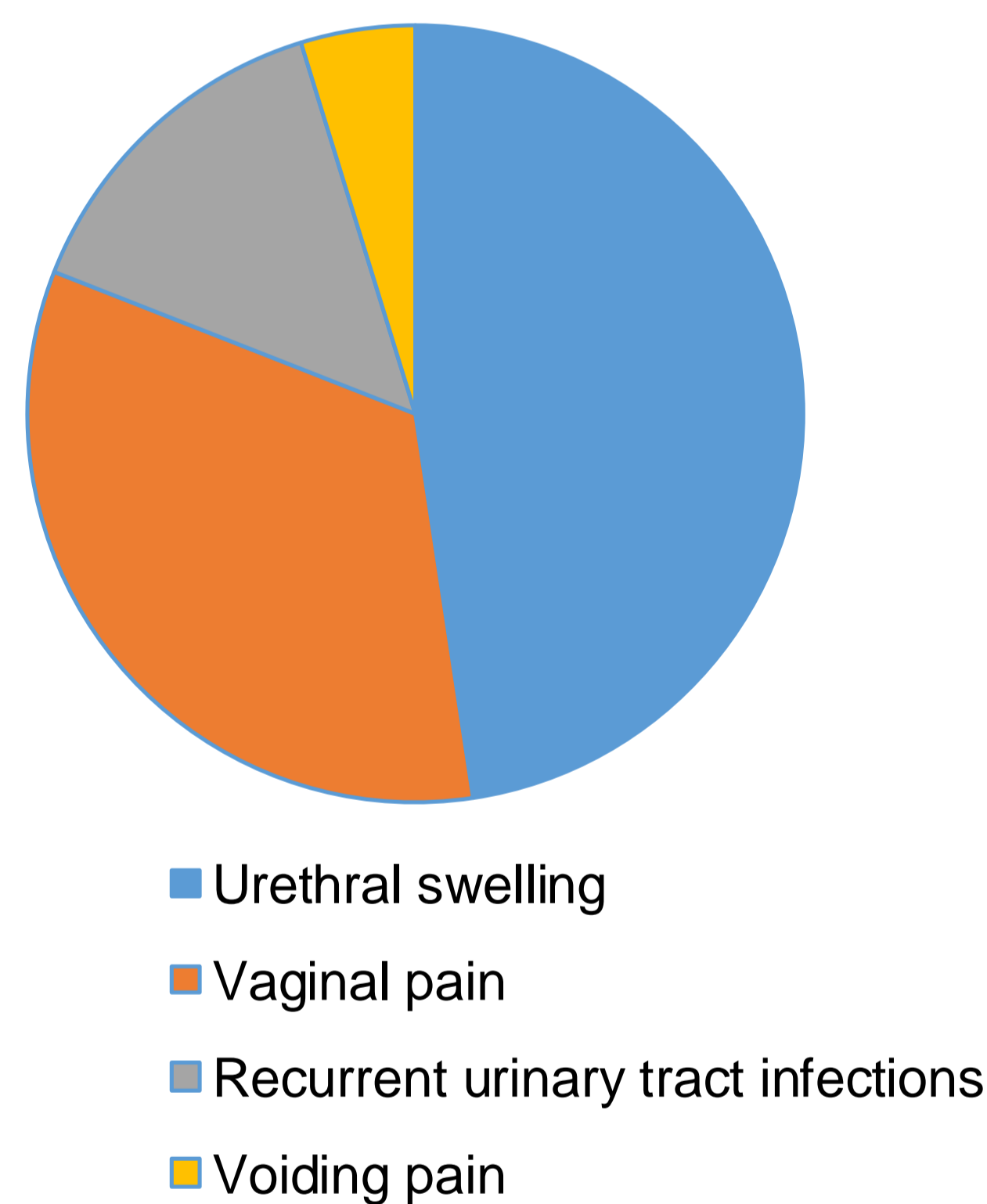
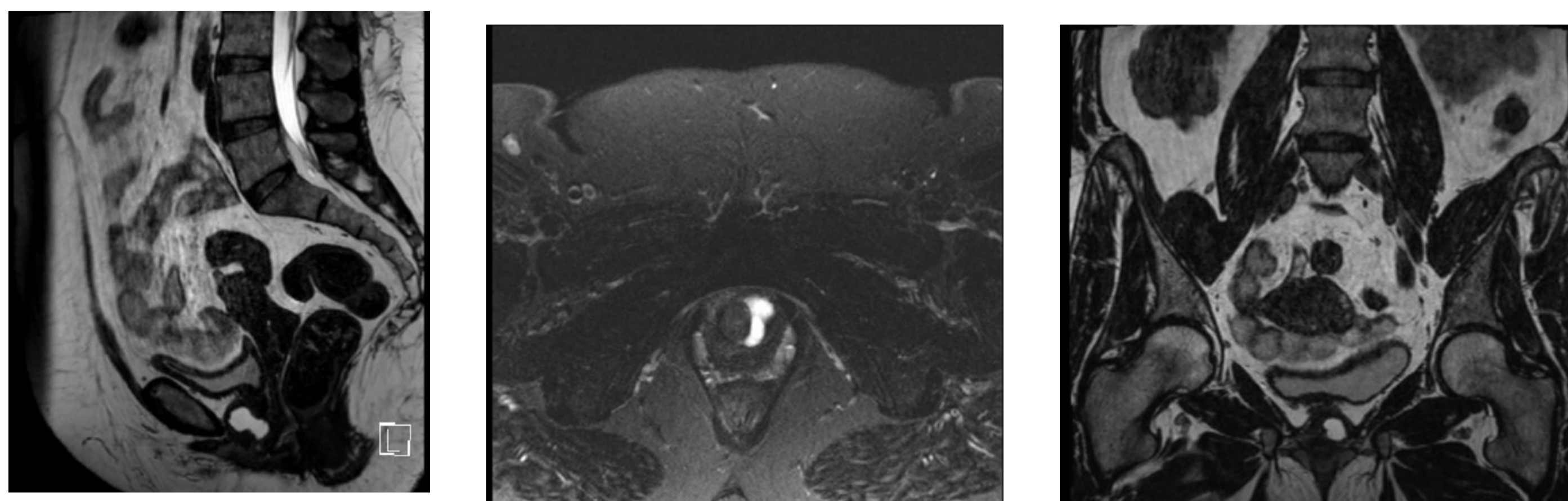


Figure 2: A urethral diverticulum on MRI



- A recurrence was confirmed by MRI in 19% of the (median follow-up 11 months (range 4-38));
- 50% of the women reported to be free of symptoms due to surgery; 37% still had some symptoms, but less bothering than before.

Interpretation of results

- Main symptoms at presentation: urethral swelling or vaginal pain;
- In line with other literature: stress incontinence most frequent de novo complaint;
- Compared to other studies: relatively high percentage of de novo stress incontinence;
 - No measure of severity of incontinence in other studies, which makes it impossible to fairly compare;
 - In this study: only mild complaints, requiring less than 4 panty liners a day;
 - No operations were needed to resolve incontinence.
- Given the high incidence of de novo stress incontinence, the importance of trying to keep clear of the sphincter during surgery is stressed (e.g. by closely studying the pre-operative imaging), as well as the pre-operative counselling regarding post-operative complaints.
- No previous studies presented data on subjective results from patients after diverticulectomy and the chance at recurrence, which both are important elements in pre-operative counselling.

Concluding message

A urethral diverticulum in women often reveals itself by a urethral swelling or vaginal pain. Excision of the diverticulum results in 87% of the patients to fewer or complete resolution of complaints. However, there is a considerable chance of de novo stress incontinence and voiding symptoms such as dribble. Patients should therefore be properly consulted before they decide to undergo surgery.

References

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Presenter and corresponding author:

M.W. Bos, department of urology Maastricht University Medical Centre

mathilde.bos@mumc.nl