

A.Martan, J.Mašata, M.Halaška and M. Otčenášek

Department of Obstetrics and Gynecology, Charles University, Prague, Czech Republic

ULTRASOUND IMAGING OF PARAVAGINAL DEFECTS

AIMS OF STUDY

was to analyze whether the transabdominal and introital ultrasonography can identify paravaginal defects (PVD) and to determine the changes after paravaginal defects repair (PVDR) (1).

MATERIALS AND METHODS

For our study, we selected 24 women with GSI without any previous antiincontinence surgery. Their mean age was 52.1 years (s – 10.3), mean weight was 73 kg (s – 13), and mean parity was 2.1 (s – 0.8). The classification of the defects of the anterior vaginal support system are as follows (2): 1/ Paravaginal defect - The separation of uni- or bilateral attachment of the pubocervical fascia from the arcus tendineus fascial covering the obturator internus and levator ani muscles 2/ Transverse defect 3/ Distal defect 4/ Central defect Our diagnosis of GSI consisted of physical examination, urodynamics, and pad - weight test. The bladder of a patient in supine position was filled with 300 ml of sterile saline. A 3.5 or 5 MHz curved array probe was used to assess the bladder neck position and mobility from perineal approach during US examination by Acuson 128 XP 10 The same probe was then used from abdominal approach to determine PVD in transverse planes (Figure 1a). Subsequently a 7 MHz sector vaginal probe from introital approach in coronal planes was used to determine PVD (Figure 1b).

Figure 1a

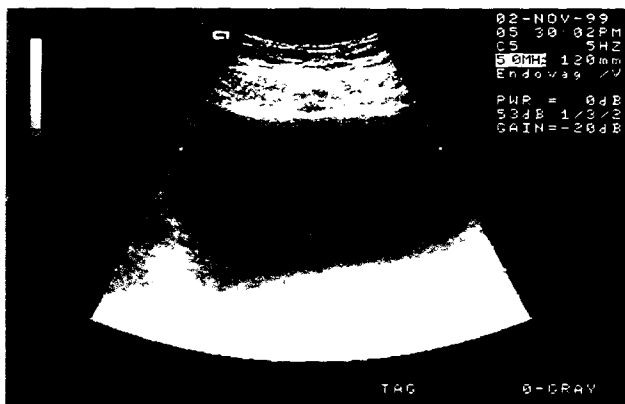
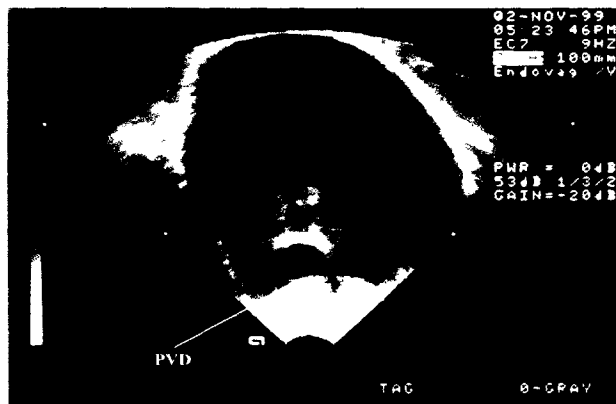


Figure 1b



The same examination was performed between the first and second, as well as between the fifth and sixth weeks after Burch colposuspension and PVDR (Figures 2a,2b). A t-test and difference rows were used for the statistical evaluation.

Figure 2a

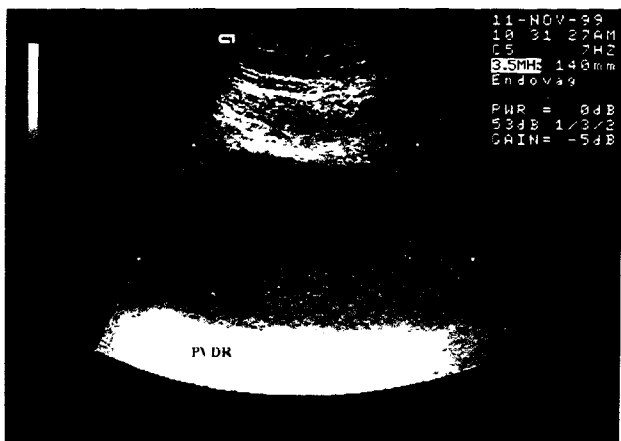
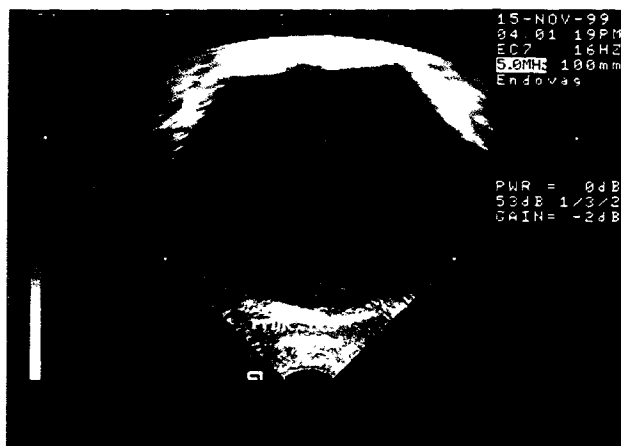


Figure 2b



RESULTS

We found significant differences in bladder neck position and mobility before and after the operation at $p < 0.01$ (Table 1)

Table 1. Ultrasound of the lower urinary tract - the γ angle

	the γ angle – at rest		diff	
	x	s	x	s
Women with GSI	86	18	70	27
Women after Burch colp and PVDR	63	11	6	8

x – the average value

s – the standard deviation

The γ angle- the angle between the line connecting the inferior point of symphysis with the bladder neck and the axis of symphysis
 diff.- differences between the γ angle during Valsalva and the γ angle during squeezing

In women with symptoms of GSI (n = 24), we found from the abdominal approach of US scanning and during the operation unilateral or bilateral PVD in 20 women. Unilateral defect was found nine times on the right side but only twice on the left side. In nine women the defect was bilateral. The introital approach showed similar results, only in three patients with bilateral defect the examination indicated right defect but during the operation a bilateral defect was determined. The sensitivity of US scanning by introital approach was 89.7 percent. During the operation, all PVDs which were obtained from abdominal approach were confirmed. We did not find PVD after the operation (PVDR) between the first and second weeks in eighteen women from the abdominal approach, but in twenty women from the introital approach. Five to six weeks after the operation, our results were confirmed from abdominal and introital approach in all cases. We did not find PVD in the patients after PVDR.

CONCLUSIONS

Routine US evaluation can help to evaluate PVD and PVDR and thus provide a good feedback for surgeons. We also recommend that PVDR should be added to the Burch colposuspension as an operation to correct cystourethrocele.

REFERENCES

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