of severity of urinary incontinence. However, its' sensitivity is insufficient for it to used as an outcome measure for treatment.

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COMPARISON OF DETECTION OF URINE LEAKAGE WITH COLOUR DOPPLER WITH SOME OTHER ULTRASOUND PARAMETERS (FUNNELING).

Aims of study

The aim of our study was to objectify a leakage of urine during perineal ultrasound examination using a Colour Doppler (CDV), and to compare it with some other ultrasound parameters.

Methods

43 women with urodynamically proved stress incontinence were included in the study. The urinary bladder was filled to 300 ml with sterile saline. For the perineal examination a curved array probe 5 MHz and for the introital examination sector probe 7 MHz (Acuson 128 XP 10) were used. For all women, we assessed the position and mobility of the bladder neck. The measurements were taken in supine position at rest, during Valsalva and squezing without Foley catheter. We performed an examination using a Colour Doppler (CDV) to detect leakage during Valsalva and coughing. Thereafter, an introital examination followed to detect occurrence of funneling. Funneling was described as an enlarged distance between the inner edges of proximal urethra during Valsalva or as the leak of the urine or contrast medium into proximal urethra during Valsalva. We documented funneling by the measurement of the inner orifice of the urethra at rest and during Valsalva. Subsequently, we performed a perineal examination using an ultrasound contrast medium (Levovist, Shering) and the CDV to detect leakage, and we compared all examinations performed.

Results

Mobility of the urethra did not differ from values common in incontinent patients as published in previous studies. During examination without using a contrast medium, a leak of urine was diagnosed by CDV in 33 patients (77% sensitivity), and funneling in 38 women (88% sensitivity). During examination with a contrast medium (CM), funneling was present in 40 patients(93% sensitivity). In 41 cases, a leak was detected using CDV after filling with a contrast medium (95% sensitivity). In one case we detected leakage without funneling.

Conslusions

By a colour doppler imaging (CDV) we can objectify a leak of urine, determine the positi of urethra in which such leakage of urine occurs. A contrast medium significantly increas the sensitivity of doppler examination and we can exactly ascertain the onset of t leakage.

Fig. 1
Leakage detected with CDV without CM

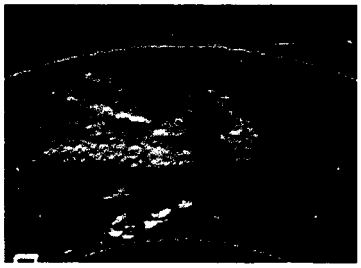


Fig. 2
Leakage detected with CDV with CM

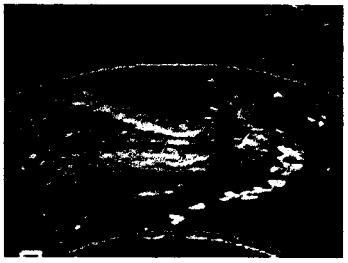
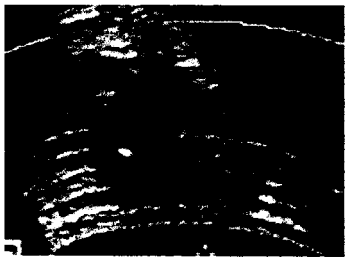


Fig. 3
Minimal leakage detected with CDV with CM



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Title (type in CAPITAL LETTERS, leave one blank line before the text):

SENSORY FIBERS IMMUNOREACTIVE TO THE VANILLOID RECEPTOR PROTEIN: DISTRIBUTION IN THE RAT URINARY BLADDER

Aims of study: Capsaicin sensitive primary afferents innervating the urinary bladder encode chemical, mechanical [1] and thermal (cold) stimuli) [2]. Recently it was shown that capsaicin sensitivity was due to the expression of a membrane protein, the so called vanilloid receptor or VR-1[3]. This receptor seems to work as a sensory transducer, activated by heat and protons. The distribution of capsaicin sensitive fibers in the bladder wall has been investigated until now by indirect methods such as immunoreactive stainings against SP[4] or CGRP[5]. The availability of an antibody against the vanilloid receptor provides now a direct method to stain capsaicin sensitive primary afferents. In this study we report the distribution of VR-1 immunoreactive fibers in the bladder wall of the rat at light and electron microscope level.

Methods: Adult Wistar rats were used. For light microscopic studies four animals were anaesthetized with