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## HALF-FILLED BLADDER FOR PELVIC SONOGRAMS

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Since 1981, we have been performing pelvic sonograms, but we never used enema or frusemide tablet or injection to fill the urinary bladder, however, we encouraged the patients to drink water prior to pevic sonogram and in many occasions. We perform pelvic sonograms before and after micturition to avoid confusions regarding any cyst or placenta previa. Therefore, we do agree with Benacerraf<sup>1,2</sup> however, many of our centres do not have transvaginal sonography or Doppler imaging. Benacerraf et al. studied 206 patients undergoing pevic sonography and found that transvaginal scans alone were sufficient to visualize all findings in 172 patients (83.5 %). An additional transabdominal component through an empty bladder was necessary to fully evaluate another 31 patients (15.1 %). The full-bladder technique was beneficial to only 3 patients (1.5 %). However, whether these 3 patients benefited from the full bladder scan was debatable, because the only additional finding was a normal ovary. Their studies showed that the transabdominal scan with the empty bladder was indeed important particularly for evaluating enlarged uteri and masses high in the pelvis. These organs were easily visualized by transabdominal approach with mild pressure applied by the sonographer or sonologist. Tessler et al. also showed that in patients undergoing transvaginal scans, the transabdominal full-bladder technique only resulted in the identification of normal ovaries, thus not altering patient outcome.<sup>3</sup> Hill and Breckle<sup>4</sup> suggested that the post-voiding transabdominal scan of the pelvis is helpful in visualizing a high-riding ovary, which may have been pushed out of view by the full bladder.

Wayne Persutte and Roger Lenke wrote an article on filling of the bladder for pelvic sonograms and it was presented at the Society of Perinatal Obstetricians meeting in 1988. Their original study was performed after a questionnaire showed that compared with having amniocentesis, most patients said that the full bladder were more uncomfortable.<sup>5</sup>

Lenke of Indiana Center for Prenatal Diagnosis (USA) reviewed a case in which the full bladder approach resulted in the death of both the mother and her fetus. The patient was admitted with undiagnosed severe preeclampsia, ultrasonography was ordered, she was given several glasses of water and her intravenous line was opened. Because she was in renal shutdown, her bladder would not fill, but pulmonary edema developed, and both she and the fetus died. Lenke now tells patients going to other

offices not to fill their bladder but, rather than argue with the sonographers, they should just tell them that their bladder is full.<sup>6</sup>

For prostate exam we like to have sonograms both before and after micturition to know post-voiding residue.

### REFERENCES

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