

Sonographic findings in acute urinary retention secondary to retroverted gravid uterus: the pathophysiology and preventive measures

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摘要

Abstract

OBJECTIVES: To explore the pathophysiology of acute urinary retention in women with a retroverted gravid uterus and to suggest measures to prevent its recurrence. **METHODS:** In five women with a retroverted gravid uterus and acute urinary retention necessitating catheterization, the morphology of the genitourinary system was assessed by using transabdominal, transvaginal and introital sonography. **RESULTS:** In the supine resting position, the cervix was displaced superiorly and anteriorly by the impacted and retroverted uterus so that it compressed the lower bladder, leading to obstruction of the internal urethral orifice. The upper bladder extended superiorly and overlay the uterus. During straining, urethral motion was not limited and there was an average rotational angle of the bladder neck of 32 degrees, ranging from 21 degrees to 44 degrees. Increasing abdominal pressure further compressed the lower bladder. Measures suggested to the women for the prevention of urinary retention included limiting fluid intake before sleep, changing from the supine to the prone position before getting up and avoiding a Valsalva maneuver but performing a Crede maneuver during voiding. In all except one case these measures successfully prevented recurrence. **CONCLUSIONS:** Acute urinary retention secondary to a retroverted gravid uterus is caused by a displaced cervix compressing the lower bladder and interfering with drainage to the urethra. The urethra itself is not compressed or distorted. Understanding the pathophysiology of the lower urinary tract may allow maneuvers which prevent acute urinary retention.