

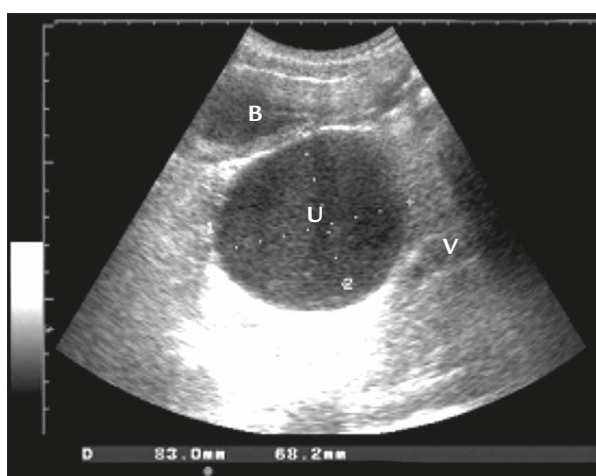
# HEMATOCOLPOMETRA ASSOCIATED WITH AN IMPERFORATE HYMEN AND ACUTE URINARY RETENTION MIMICKING A PELVIC MASS

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A 12-year-old female was previously sent to the emergency department because of a sudden onset of lower abdominal pain and the difficulty of micturition. The abdominal pain persisted following urinary catheterization of 900 mL of retained urine. Thereafter, she consulted our gynecologic department. The patient was unmarried and had no sexual experience. She had not had any medical problems, operations or menstruation. During the visit, examination of the external genitalia was not made because of her young age. Ultrasonographic examination revealed a central echolucent cystic pelvic mass of about 8.3 × 6.8 cm (Figure 1). The CA-125 level was 1,049.10 U/mL (normal, <35 U/mL). Videolaparoscopy was performed and demonstrated bilateral normal ovaries, an enlarged corpus, severe pelvic endometriosis, and a small amount of intraperitoneal blood (Figure 2). Hematocolpometra was diagnosed. Subsequent perineal examination confirmed a bluish bulging imperforate hymen. Lysis of adhesion, cautery of the endometriosis, and removal of the blood in the pelvic and abdominal cavities were performed by laparoscopy. The patient did well after the operation.

Hematocolpometra associated with imperforate hymen and acute urinary retention is uncommon. Chuang and Kan [1] demonstrated the compressive effect of hematocolpometra to the urinary outlet by computerized tomography scans. Sondgrass [2] first reported a case of acute urinary retention associated with hematocolpometra in 1931. To date, at least 22 cases of imperforate hymen with acute urinary retention have been reported [2–19]. Most of these reported cases presented in adolescence (average age, 13 years). The



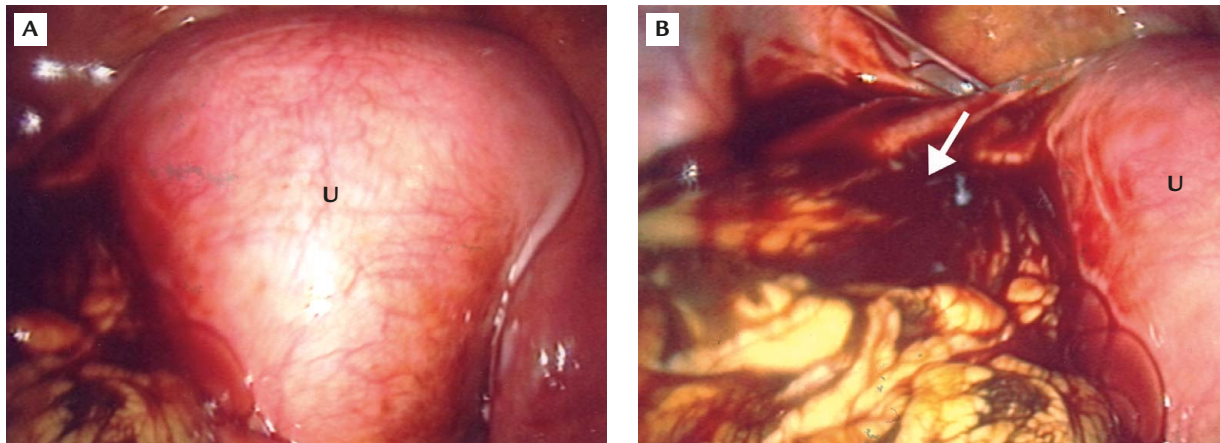
**Figure 1.** Sagittal midline ultrasound scan before surgery shows an 8.3 × 6.8 cm echolucent cystic mass mimicking a pelvic neoplastic tumor. B = bladder; U = uterus; V = vagina.

youngest patient was a 3-month-old girl who had suffered from repeated urinary tract infections because of urinary retention related to pyocolpos [12]. Most cases had abnormal external genitalia in addition to a chief complaint of urinary retention. A few cases had delayed diagnosis of the associated genital abnormalities because of the focus on the management of abnormal urinary tract dilation and urinary tract infection [6,12,19]. Two out of the 22 cases had concomitant urologic abnormality such as contralateral renal agenesis [7], or genetic disorder such as ectrodactyly-ectodermal dysplasia-clefting syndrome [16]. All cases had an uneventful recovery after surgical treatment.

The present case describes a 12-year-old adolescent female who was initially sent to the emergency department with the chief complaints of acute abdominal pain and urinary retention. She received only conservative management with urinary catheterization to relieve the urinary symptoms. A pelvic mass was additionally found using ultrasonography. However, the exact etiology of



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**Figure 2.** Videolaparoscopy reveals (A) a distended uterine corpus associated with the hematocolpometra, and (B) retrograde menstrual blood (arrow). U=uterus.

the pelvic mass was diagnosed correctly only during the operation. This case provides evidence of the difficulty in making the correct diagnosis of imperforate hymen associated with acute urinary retention simply using pelvic examination and ultrasonography, and demonstrates that hematocolpometra associated with imperforate hymen and acute urinary retention may mimic a pelvic neoplastic mass. We suggest that hematocolpometra associated with imperforate hymen should be included in the differential diagnosis in adolescent females suffering from acute abdominal pain and urinary retention, in order to avoid unnecessary surgery and morbidity.

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