MULTILOCULAR BLADDER DIVERTICULA
OR MALIGNANT PELVIC MASS: CASE
REPORT AND IMAGES

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CASE REPORT

An 89 year old lady presented with a left humerus fracture and a history of dementia. Abdominal examination revealed a mass arising from the pelvis. On ultrasound scan there was a large multi-locular cystic mass; with thick internal septations and fluid levels, measuring 12.9cm x 9cm x 8.7cm in size. At the time of the scan the urinary bladder was empty and there was no visible lymphadenopathy or ascites. The opinion was that this multi-locular cystic pelvic mass was most likely an ovarian neoplasm. An urgent referral to gynaecology was requested for further evaluation.

The ovarian cancer marker was raised at 39 KIU/ml but renal and liver functions were within the normal range. The patient was reviewed by a gynaecologist and a MRI scan was requested. The scan demonstrated a huge cystic structure in the pelvis measuring 13.8 x 15.4 x 15.7 cm which appeared to be in the bladder with a large diverticulum extending posteriorly and inferiorly. The sagittal scans demonstrated the floor of the bladder with the urethra. There was no wall thickening or filling defects of the bladder lumen. Adnexae and uterus could not be reliably identified and were most likely atrophic. (Fig.1)

Urology review was requested. After insertion of the urethral catheter; over 1500 ml of cloudy urine with debris was drained. The urine sample grew coliform and the patient was treated with antibiotics. On the check ultrasound scan there was no longer a cystic mass and 2 diverticula up to 4 cm in diameter; on each side; were described. This patient was managed by a long term catheter, as the bladder was hypotonic and on removal of the catheter, the urine would recollect in the diverticula.

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DISCUSSION

Multilocular bladder diverticulum may present diagnostic difficulties and could raise concerns about pelvic malignancy.

Bladder diverticulum is a herniation of the bladder mucosa through the detrusor muscle. It can be congenital or acquired (due to an infection, inflammation or bladder outlet obstruction). The size of the diverticulum can vary. It can be wide or narrow mouthed, dictated by the size of the detrusor defect. The diverticular opening size has functional implications as narrow-mouthed diverticula often empty poorly. Stasis of urine within diverticula can lead to stone formation or epithelial dysplasia.

Diverticula in the base of the bladder may present with earlier symptoms and cause obstruction while those in the "dome" of the bladder may not produce any symptoms until advanced disease. The diverticulum may prevent complete emptying of the bladder and may cause recurrent urinary tract infections. The diverticulum can cause ureteral obstruction. Voiding cystography and intravenous pyelography are the best imaging modalities. Some diverticula resolve spontaneously relieving the bladder outlet obstruction. Surgery is generally required for congenital bladder diverticula and diverticula causing bladder outlet obstruction and impaired kidney function, recurrent urinary tract infections, vesicoureteral reflux, stone formation, premalignant and malignant changes.

There are few other rare causes of multi-loculated pelvic mass in women. Epithelial ovarian tumours may be multilocular, and, when malignant, are associated with varying proportions of solid tissue. Reis-Filho et al described a case of cystic mucinous pelvic tumour with mural nodules of anaplastic carcinoma. Multicystic ovarian tumour usually presents with abdominal pain and enlargement, on the scan there would be multicystic pelvic mass with septation and solid components. Multifocal multicystic benign mesothelioma was described by Varma et al. (2004). This rare condition presents as a large solitary multiloculated pelvic cyst in a woman with postmenopausal bleeding.

In conclusion, most diverticula do not cause problems. Incidental finding can raise concerns about malignancy. The need for medical attention for a case of bladder diverticulum increases with age. Symptomatic patients with pelvic mass demonstrating septation and solid components on a scan are suggestive of malignancy.
References


