Introduction

Although most ovarian cysts in the pediatric population are characterization as functional in nature (such as PCOS, abscess after infection, or pregnancy related), the annual incidence of neoplastic ovarian tumors in children and adolescents is 0.2-2.4 out of every 100,000 patients 1. These tumors require more extensive clinical investigation for both early detection and optimal management of possible ovarian torsion, malignancy, and surgical intervention.

Case Presentation

A 15-year-old Caucasian female presented to our hospital, referred by her urologist for persisting urinary retention and concern for lower abdominal distention. When the patient was first admitted, the patient underwent an ultrasound, urodynamic testing, cystoscopy, and bilateral retrograde pyelogram. Despite the fact that the patient did not have a history of renal pathology, the ultrasound revealed a large, unilocular cyst occupying the majority of the right pelvis, up to diaphragmatic level, and no alcohol or drug abuse.

On physical exam, there was remarkable mid lower abdominal distention. There was no guarding or tenderness with palpation, no organomegaly, and normoactive bowel sounds. Before hospital discharge, the patient underwent an abdominal ultrasound, pelvic ultrasound, and abdominal CT. On imaging, the patient was found to have an unusually large, benign ovarian serous cystadenoma.

Hospital Course

A major reason for the patient’s admission to the hospital was to find the origin of her lower abdominal distention and help point towards a diagnosis. The results of the CT (Figure 1) demonstrated a large, unilocular, simple cystic mass at the midline. The patient then underwent an MRI of the abdomen/pelvis (Figure 2). This time, a clearer picture emerged, showing a 17.3 x 15 x 8.6 cm unilocular cyst.

In order to narrow down the diagnosis further, we decided to order an MRE of the abdomen/pelvis (Figure 2). This time, a clearer picture emerged, showing a 17.3 x 15 x 8.6 cm unilocular cyst.

Despite the fact that the mass appeared to arise from the right side, the patient had an MRI of the abdomen/pelvis (Figure 2). This time, a clearer picture emerged, showing a 17.3 x 15 x 8.6 cm unilocular cyst.

Given the patient’s urinary symptoms and subsequent diagnostic imaging findings, the differential diagnosis at this point included bladder outlet obstruction, urachal cyst, serous cystadenoma, simple ovarian cyst, or paraovarian cyst. Ovarian cancer was also possible, considering her family history of ovarian cancer.

About 1 week post-discharge from the hospital, the patient underwent laparoscopic surgery for removal of the mass. Pathology revealed a benign right ovarian serous cystadenoma.

Discussion

When a lesion of the ovary is significantly large (greater than 8 cm), surgical intervention is preferred due to its reduced chance of spontaneous resolution, increased risk of torsion, and amplified term complications. When the lesion is malignant, surgical removal is mandatory.

When the lesion is malignant, surgical removal is mandatory. While most functional ovarian cysts occur due to failure of the follicular phase of the menstrual cycle, these cysts can also be caused by inflammatory conditions or hormonal imbalances.

References