An 80-year-old woman with progressive abdominal fullness for two days, intermittent abdominal pain, nausea and vomiting.

An 80-year-old woman was admitted to the emergency department with progressive abdominal fullness for two days, intermittent abdominal pain, nausea and vomiting. Her relevant medical history included mitral valve replacement 10 years ago with subsequent anticoagulation, type 2 diabetes mellitus, arterial hypertension and chronic renal failure, all of which controlled with medications. Physical examination revealed a distended abdomen without tenderness or muscle guarding. No mass was palpated in the bilateral groin. Rectal examination was negative.

Nonenhanced CT scan demonstrated obvious intestinal obstruction with a low density mass in the right obturator canal area.
Fig.1: Axial slice through the lower pole of right kidney demonstrated dilated, fluid filled small bowel loops and collapsed colonic loops. It is important to mention small amount of intraperitoneal fad, which bothered interpretation of CT findings and diagnosis.
Fig. 2: Axial nonenhanced CT scan shows a combination of dilated and collapsed small bowel loops into the pelvis.
Fig. 3: Axial CT scan at the level of pelvic floor demonstrated fluid-filled mass located between obturator externus muscles and ipsilateral pectineus. Hyperdense vaginal ring and balloon catheter in the vesicle bladder are also visible.
Fig. 4: Oblique reconstruction of native abdominal and pelvic CT examination demonstrates the position of incarcerated small bowel loop in the right obturator canal.
Fig. 5: Oblique reconstruction of native abdominal and pelvic CT examination shows collapsed lumen of the distal ileum, after the incarcerated intestinal segment.

Fig. 6 and 7: Intraoperative photographs shows the widened right obturator canal with incarcerated small bowel loop in it and the incarcerated small intestinal loop.
Diagnosis: Right obturator hernia
Emergency laparotomy was performed. During the operation, a 10 cm loop of small intestine was revealed herniated into the right obturator canal. Proximal intestine dilated severely and distal intestine collapsed. The incarcerated intestine was reduced. Intestinal segmentectomy and simple suture closure of obturator foramen were performed.

Discussion: Obturator hernia is a rare variety of abdominal hernia and occurs through the obturator foramen in the pelvis with no external lump. It is significant cause of morbidity and mortality, especially in the elderly age group. The mortality rate of obturator hernia is highest among all abdominal wall hernias (range 13 percent to 40 percent) [1,2]. Obturator canal is 2 to 3 cm long and 1 cm wide, and contains the obturator nerve and vessels. It is bounded superiorly and laterally by the pubic bone and inferiorly by the obturator membrane.

Obturator hernia is nine times more common in females due to their wider pelvis, more triangular obturator canal opening and greater transverse diameter. It occurs most frequently in older age group between 70 and 90 years [3]. The preperitoneal fat around obturator vessels and nerves play a protective. Malnourishment facilitates hernia formation due to loss of supporting connective tissue. In most cases, obturator hernia presents with intestinal obstruction of unknown cause. The hernia sac usually contains small bowel, especially ileum. Clinical signs due to compression of the obturator nerve are often observed. The most common sign is obturator neuralgia, presented as either hypo- or hyperanesthesia from the inguinal crease to the anteromedial aspect of the thigh [4]. The Howship-Romberg sign is characterized by pain in the medial thigh and is observed in 15 percent to 50 percent of patients with obturator hernia [5].

Various imaging examinations have been applied to establish the diagnosis. CT scan is considered the gold standard for diagnosis, whereas ultrasonography, contrast studies, herniography and plain films are less specific [5]. It is minimally invasive, readily available and requires a short time. It is especially useful in the initial period when the patient has non-specific symptoms and vague clinical signs.

Fast and correct preoperative evaluation and early surgery is the key to prevent morbidity and
mortality.

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References:

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