



# Extremely rare presentation of an omphalomesenteric cyst in a 61-year-old patient

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## ABSTRACT

The umbilicus is remaining scar tissue from the umbilical cord in the fetus. If the omphalomesenteric duct in the umbilicus is not properly closed, an ileal-umbilical fistula, sinus formation, cysts, or, most commonly, Meckel's diverticulum can develop. The others are very rare and mostly occur in the pediatric population. We describe herein a 61-year-old female with a giant omphalomesenteric cyst presented as an asymptomatic infraumbilical mass. To our knowledge, this is the oldest patient reported and the largest cyst described in the literature. The diagnosis of a painless abdominal mass frequently suggests malignancy in older patients. But, extremely rare conditions can be detected, such as an omphalomesenteric cyst.

**Keywords:** Adult, anomaly, cyst, duct, omphalomesenteric

## INTRODUCTION

The umbilicus is remaining scar tissue from the umbilical cord in the fetus. It contains the urachus, omphalomesenteric duct, and the round ligament's embryonic remnants, which can be a source of many clinical problems. Also, umbilical hernia can occur in cases of closure defects of the umbilical ring. If the omphalomesenteric duct is not properly closed, an ileal-umbilical fistula, sinus formation, cysts, or Meckel's diverticulum can develop. Meckel's diverticulum is the most common omphalomesenteric duct anomaly, and it is also the most common congenital abnormality of the gastrointestinal tract (2%). Other anomalies associated with the omphalomesenteric duct are very rare and mostly occur in the pediatric population. An omphalomesenteric duct cyst may cause symptoms, such as pain, abscesses, and hernias (1, 2). We describe an unexpected case of a giant omphalomesenteric cyst presenting as an asymptomatic infraumbilical mass in a 61-year-old woman.

## CASE PRESENTATION

A 61-year-old woman presented to our clinic with complaints of a palpable mass in the umbilical region. She had no pain and told us that she has had this mass for many years. Her medical history included hypertension, hyperlipidemia, coronary artery disease, and two previous coronary angiographies. The physical examination showed no abnormality, but there was a painless mass in the right infraumbilical region. The laboratory workup, including carcinoembryonic antigen (CEA) and carbohydrate antigen 19-9 (CA19-9), was normal. The abdominal computed tomography (CT) scan showed a thin-walled, regularly contoured, hypodense, cystic mass at the level of the umbilicus, slightly to the right of the anterior abdominal wall. The cyst measured 115 x 100 x 68 mm in size (Figure 1). Preoperatively, the diagnosis was not clear, but a number of possibilities were considered: an omphalomesenteric cyst, a urachal cyst, or a mesenteric cyst. She was informed about the surgery, informed consent was taken, and elective surgery was planned. A laparotomy via a median incision was performed. On exploration, the cyst was attached to the umbilicus, there was no evidence of a persistent urachus, and the cyst had no connection with the intestines (Figure 2). The cystic mass was resected with sharp dissection and removed (Figure 3). The histological diagnosis was an omphalomesenteric cyst. The postoperative course was uneventful, and the patient was discharged on day 2. There were no complications or complaints observed in a 1-month control examination.

## DISCUSSION

The omphalomesenteric duct, or vitelline duct, is the embryonic link between the primary yolk sac and embryonic midgut. This connection normally closes off spontaneously at about 5-9 weeks of gestation. Omphalomesenteric duct anomalies are most commonly seen in pediatric population. Vane et al. (3) reported 217 pediatric patients, from birth to 18 years. In their series, symptomatic patients accounted for 40%, and only 15% of them were over the age of 4 years. The reported symptoms of omphalomesenteric duct remnants included abdominal pain, rectal bleeding, intestinal obstruction, umbilical drainage, and umbilical hernia (4). The male:female ratio for omphalomesenteric duct anomalies is 2:1-4:1, with a male predominance.

Adult cases of omphalomesenteric cyst are extremely rare. Surgical resection is generally performed for symptomatic omphalomesenteric duct remnants. Our patient requested surgical resection and

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Figure 1. Abdominal computed tomography image



Figure 2. Omphalomesenteric cyst and umbilical connection



Figure 3. Macroscopic image of the omphalomesenteric cyst

presented to our general surgery department. However, the preoperative diagnosis was not clear, according to the radiological workup, and all diagnostic possibilities were benign. There are quite a few reported omphalomesenteric cyst cases in adults, and most of them advocated surgical resection in symptomatic patients. Laparoscopic and open approaches for symptomatic or asymptomatic patients have been reported. A 49-year-old female patient with an omphalomesenteric duct

cyst (20 x 60 mm) abscess was treated with open surgery (2). A 24-year-old male patient with abdominal pain was treated with a totally laparoscopic approach for a 20 x 45 x 75-mm-sized omphalomesenteric cyst (1). A 29-year-old male with a 50 x 80 x 100-mm-sized omphalomesenteric cyst was treated laparoscopically, and the cyst was removed through a 5-cm abdominal incision (5). In our patient, the preoperative CT assessment revealed a cyst measuring 115 x 100 x 68 mm in size. As we considered that another incision would be needed to remove the cyst properly, we did not use a laparoscopic approach.

## CONCLUSION

To the best of our knowledge, our case is the oldest patient to have an omphalomesenteric cyst, and this is the largest omphalomesenteric cyst reported in the literature. Although the diagnosis of a painless abdominal mass frequently suggests malignancy in older patients, extremely rare conditions can be detected, such as an omphalomesenteric duct anomaly. Thus, it may be helpful to remember an omphalomesenteric cyst in the differential diagnosis of someone who is admitted with complaints of an asymptomatic or symptomatic mass in the umbilical region, even in elderly patients.

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