treatment by means of a minimally invasive technique, with its intrinsic advantages.[7–9] Therefore, from our standpoint and in light of the case presented, it should currently be considered the treatment of choice.

REFERENCES

1. Gustafsson L, Falk A, Lukes PJ, Gamklou R. Diagnosis and treatment of superior mesenteric artery syndrome. Br J Surg. 1984;71:499–501.
2. Jo JB, Song KY, Park CH. Laparoscopic duodenojejunostomy for superior mesenteric artery syndrome: Report of a case. Surg Laparosc Endosc Percutan Tech. 2008;18:213–5.
3. Fernández MT, López MJ, Bardasco ML, Álvarez P, Rivero MT, García G. Síndrome de Wilkie: a propósito de un caso. Nutr Hosp. 2011;26:646–9.
4. Agrawal GA, Johnson PT, Fishman EK. Multidetector row CT of superior mesenteric artery syndrome. J Clin Gastroenterol. 2007;41:62–5.
5. Makam R, Chamany T, Potluri VK, Varadaraju PJ, Murthy R. Laparoscopic management of superior mesenteric artery syndrome: a case report and review of literature. J Minim Access Surg. 2008;4:80–2.
6. Pourhassan S, Grotemeyer D, Fürst G, Rudolph J, Sandmann W. Infrarenal transposition of the superior mesenteric artery: a new approach in the surgical therapy for Wilkie syndrome. J Vasc Surg. 2008;47:201–4.
7. Sánchez Abuin J, Fernández Fernández JC, Rodríguez Sáenz de Buruaga V, Egaña Barrenechea JM. Tratamiento de la compresión vascular del duodeno mediante reimplante de la arteria mesentérica superior. Cir Esp. 2010;87:124–5.
8. Gersin KS, Heniford BT. Laparoscopic duodenojejunostomy for treatment of superior mesenteric artery syndrome. JSLS. 1998;2:281–4.
9. Richardson WS, Surowiec WJ. Laparoscopic repair of superior mesenteric artery syndrome. Am J Surg. 2001;181:377–8.

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Obstructive Jaundice Caused by a Mucinous Adenocarcinoma of the Appendix in a Patient With Intestinal Malrotation

Ictericia obstructiva por adenocarcinoma mucinoso de apéndice en paciente con malrotación intestinal

Appendiceal mucocele is a rare disease with an incidence that ranges between 0.2% and 0.4% of all appendectomies.[1–4] It is generally asymptomatic and is an incidental finding. When it causes symptoms, the most common are abdominal pain or a palpable mass in the RLQ.

We report the case of a 62-year-old male patient with a history of arterial hypertension and hyperuricemia. He reported symptoms that had been developing over the past 4 months characterized by postprandial fullness and epigastric pain. These symptoms had also been associated with weight loss, jaundiced skin and mucous membranes the week prior to being treated in the Gastroenterology Department.

Laboratory tests showed: bilirubinemia 6.6 mg/dl, direct bilirubin 5.03 mg/dl, and other parameters (including CA 19-9 and CEA) were within normal range. A CT of the chest and abdomen revealed a lesion in the second portion of the duodenum that measured 4.9 × 4.1 cm and was compatible with a neoplastic process. This produced dilatation of the intra- and extrahepatic biliary tract with moderate gastric distension; there was no evidence of liver or lung metastases.

Upper gastrointestinal endoscopy revealed a malignant-looking stenotic lesion in the second portion of the duodenum, suggestive of extrinsic origin. Biopsies showed no evidence of malignant disease.

The patient was transferred to our General Surgery Department for scheduled surgery. During the procedure, we observed a retroperitoneal tumor infiltrating the duode-

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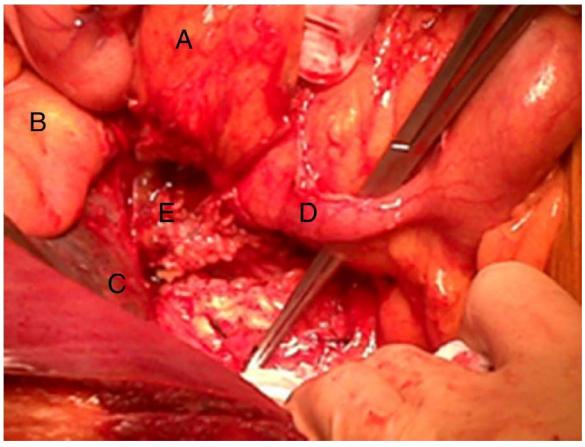

Fig. 1 – Appendicular tumor formation (clamp indicates the vermiform appendix): (A) duodenum; (B) gallbladder; (C) inferior side of liver; (D) vermiform appendix; (E) tumor formation originating at the tip of the appendix.

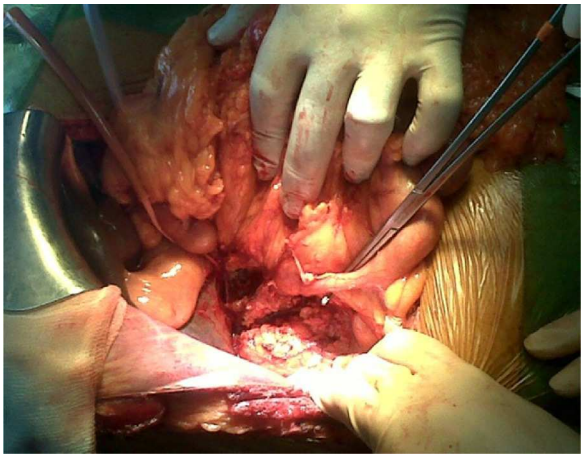

Fig. 2 – Appendix shown in the right hypochondrium.

num and head of the pancreas. It originated at the appendix, which was in an anomalous position due to intestinal malrotation that generated retraction of the cecum. The intraoperative sample identified the mass as a mucinous adenocarcinoma, and we therefore decided to carry out total pancreaticoduodenectomy and right hemicolectomy (Fig. 1).

The final pathology study reported a colloid adenocarcinoma originating in the vermiform appendix and established on a papillary adenoma that infiltrated the colon, duodenal wall, distal common bile duct and head of pancreas.

During the postoperative period, the patient developed an intra-abdominal abscess that resolved with antibiotic therapy and percutaneous drainage.

Afterwards, the patient received chemotherapy as prescribed by the Oncology Department. To date, the patient has had no evidence of recurrence after more than 20 months of follow-up.

The incidence of appendix tumors is low. One type is appendiceal mucocele, which leads to dilatation of the appendiceal lumen caused by mucinous material in its interior. It includes several disease processes, some benign and, in other cases, malignant such as mucinous cystadenocarcinoma.

The epidemiology varies according to the series, although most do not find any differences between males and females. What the series do agree on is the age at presentation, which is most frequent between the fifth and sixth decades of life.[1–8]

The most frequent form of presentation is pain/discomfort in the right iliac fossa.[2] Other symptoms and signs have also been described, such as weight loss, intermittent colic pain, urinary symptoms due to extrinsic ureteral compression, changes in bowel habits, lower gastrointestinal tract bleeding and even metrorrhagia.[5,6] There are unusual forms of presentation, but we have found no cases in which the reason for hospitalization was obstructive jaundice and epigastric pain, because in our patient there was associated intestinal malrotation. This is caused by a congenital anomaly of intestinal fixation and rotation, comprised of a series of positional abnormalities of the intestine that occur between the 5th and 11th weeks of gestation that result in incorrect, incomplete or absent intestinal rotation. Its incidence has not been determined since some cases are diagnosed during adulthood as incidental findings.[9] However, most cases (between 64% and 80%) are diagnosed in the first month of life due to volvuli or Ladd bands.

The absence of the last stage of intestinal rotation in our patient situated the appendix in the region of the right hypochondrium, retroperitoneal, with the cecum and ascending colon occupying the theoretical region of the transverse colon (Fig. 2).[10]

This anomalous location of the appendix, and its tumor, produced compression/infiltration of the common bile duct, causing obstructive jaundice as well as duodenal infiltration and stenosis.

Conflict of Interest

The authors have no conflict of interests to declare.

REFERENCES

1. Utrillas AC, Muniesa JA, Val Gil JM, Cruces A, López P, González M, et al. Mucocele apendicular. Rev Esp Enferm Dig. 2008;100:739–40.
2. García A, Vázquez A, Castro C, Richart J, Gómez S, Martínez M. Mucocele apendicular: presentación de 31 casos. Cir Esp. 2010;87:108–12.
3. Rodríguez A, Suárez G, Bonelli C, González A, Lorenzo J, Cuerpo M, et al. Masa quística retroperitoneal gigante: mucocele apendicular. Actas Urol Esp. 2004; 28:327–31.
4. Premoli G, Pierini L, Ramos R, Minatti W, Capellino L. El mucocele apendicular. Rev HPC. 2003;6.

5. Avila P, Jensen C, Azolas R, Gallegos I, Mira M, Zamorano C, et al. Mucocele apendicular: reporte de un caso clínico. Cuad Cir (Valdivia). 2004;18:43–7.
6. Hernández E, Reguero J, Aguilar J, Fragela A. Mucocele del apéndice: formas de presentación. AMC. 2004;8. 1025-0255.
7. Soueï-Mhiri M. Mucocele of the appendix: retrospective study of 10 cases. J Radiol. 2001;82:463–8.
8. Stocchi L, Bruce G, Dirk R, Jeff R. Surgical treatment of appendiceal mucocele. Arch Surg. 2003;138:585–90.
9. Pickhardt P, Bhalla S. Intestinal malrotation in adolescents and adults: spectrum of clinical and imaging features. AJR. 2002;179:1429–35.
10. Martin V, Shaw-Smith C. Review of genetic factors in intestinal malrotation. Pediatric Surgery Int. 2010; 26:769–81.

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Negative Pressure Therapy for the Treatment of Inguinal Lymphatic Fistula

Terapia con presión negativa para el tratamiento de fístula linfática inguinal

Lymphatic complications after surgery in the inguinal region are attributed to the injury of small lymphatic vessels. Despite efforts to prevent damage, the incidence of lymphorrhea currently reported after these procedures is around 2%.[1] Several therapeutic options have been described with varying degrees of success, and the experience of vacuum therapy in this field is limited.

We present the case of a 75-year-old male with type II diabetes, dyslipidemia and benign prostatic hypertrophy who came to our consultation due to an increased abdominal perimeter and poly-lymphadenopathy syndrome. Under local anesthesia, we resected a right inguinal lymph node measuring 4 cm in diameter. The pathology study confirmed the diagnosis of diffuse large B-cell lymphoma that was rich in T cells, and chemotherapy was initiated.

Seven days after the intervention, we observed an elastic tumor formation in the surgical wound that was non-pulsatile, showed no signs of inflammation, was painful and produced a mild serous exudate. It was drained and gauze was placed in the wound with an adhesive collection bag. Ten days later, there was continuous discharge of about 300 ml per day of clear liquid, which made us suspect the presence of a lymphatic fistula. Initially, conservative treatment was started with a compression bandage and rest. However, given the persistently high discharge volume 40 days after surgery, we decided to re-operate. During this operation, we found no evidence of any leaks or the supposedly injured lymphatic duct, and closure of the wound was performed with transfixion sutures.

Forty-eight hours after reoperation, the wound once again appeared tense with a clear exudate. We therefore decided to re-open it and implement a negative-pressure wound therapy system made with gauze, a 16 French suction catheter and adhesive sterile dressing, as shown in Fig. 1. Continuous suction at −10 mmHg was applied. After 6 days of treatment with a gradual decrease in discharge until cessation, the vacuum system was withdrawn and the wound was almost entirely closed, with good granulation tissue and no exudate

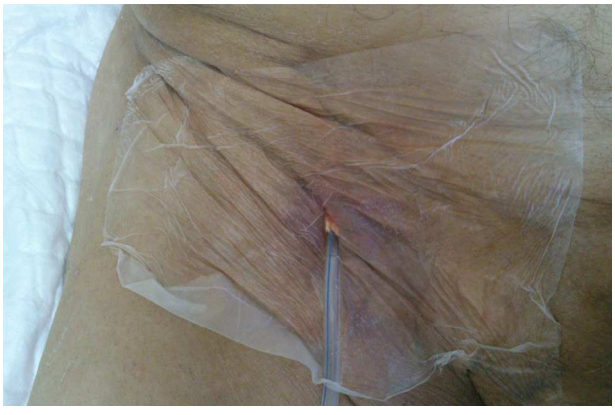

Fig. 1 – Vacuum system applied to the inguinal wound.

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