https://doi.org/10.22491/2357-9730.121974

Mucinous cystic neoplasm of the liver

Daniel Navarini[1-3], André Luca Boeira Rovani[1], Antônio Benincá Albuquerque[1], Rubens Rodriguez[4], Carlos Augusto Scussel Madalosso[2,3]

ABSTRACT

A 55-year-old woman was investigated for occasional epigastric pain and weight loss. T2-weighted abdominal magnetic resonance imaging and magnetic resonance cholangiography revealed a multilocular cyst with multiple septa and a solid component in the liver, measuring 6.1 × 4.8 × 6.5 cm. Given the patient's symptoms and malignant potential, a laparoscopic segmentectomy with partial resection of segments IV B and V was performed to completely remove the cystic lesion, associated with cholecystectomy. Histopathology demonstrated a cyst lined by columnar mucinous epithelium. Therefore, the diagnosis was mucinous cystic neoplasm of the liver. This article presents a case report and literature review of this entity.

Keywords: *Mucinous cystic neoplasm of liver; hepatectomy; abdominal surgery*

Clin Biomed Res. 2022;42(3):299-301

1 Faculdade de Medicina, Universidade de Passo Fundo. Passo Fundo, RS, Brasil.

2 Hospital São Vicente de Paulo. Passo Fundo, RS, Brasil.

3 Clínica Gastrobese. Passo Fundo, RS, Brasil.

4 Instituto de Patologia de Passo Fundo. Passo Fundo, RS, Brasil.

Corresponding author:
Daniel Navarini
danielnavarini@hotmail.com
Faculdade de Medicina, Universidade de Passo Fundo
Rua Teixeira Soares, 817
99010-080, Passo Fundo, RS, Brasil.

Mucinous cystic neoplasm (MCN) of the liver and biliary system is a cyst-forming epithelial neoplasm typically showing no communication with the bile ducts, composed of cuboidal to columnar, variably mucin-producing epithelium, and associated with ovarian-type subepithelial stroma. MCNs are quite rare, with an incidence of 1 case per 20,000-100,000 person-years, and they constitute < 5% of the liver cysts[1].

Cystic liver disease affects 5-10% of the world population and, in 2010, the World Health Organization classified the cystic neoplasm of the liver into two distinct entities: mucinous cystic neoplasm of the liver (MCN-L) and intraductal papillary neoplasm of the bile duct (IPN-B)[2].

MCN-Ls are rare, being observed in less than 5% of all cystic liver diseases, are characterized by the presence of ovarian stroma, and have no communication with the bile ducts[3,4]. The lesions, most often solitary, occur mainly in the liver and occasionally in the extrahepatic biliary system[1]. MCN-Ls may present with malignant degeneration to cystadenocarcinomas[4,5]. Mucin-producing IPN-B, echinococcus cyst, and hepatocellular carcinoma with necrosis are possible differential diagnosis for MCN-Ls[3]. At the time of presentation, nearly all patients present symptoms, typically abdominal pain and swelling[1]. These lesions tend to occur more in middle-aged women, presenting with nonspecific abdominal symptoms, including abdominal pain, distension, nausea, and vomiting. MCN-Ls are usually an incidental imaging finding, since laboratory values are often normal[4,5]. The treatment of choice for mucinous cystadenoma of the liver is radical excision of the lesion, taking into account the risk of malignant transformation to cystadenocarcinoma[4]. A complete resection of a non-invasive biliary MCN has an excellent prognosis. The prognosis is much harder to predict for patients with an invasive adenocarcinoma arising in association with MCN. Recurrences are not uncommon after incomplete excision[1].

We describe the case of a 55-year-old woman presenting with occasional epigastric pain and weight loss of 4 kilograms. Abdominal magnetic resonance imaging revealed a liver thick-walled multiseptated cystic lesion with solid component, measuring 6.1 × 4.8 × 6.5 cm (Figure 1). The solid component represented a small proportion of the cystic lesion's volume. The solid component's dimensions and vascular pattern were not specifically described in the anatomopathological report, as well as calcifications, necrosis,

hemorrhage, dysplasia, and malignization. Abdominal ultrasonography and computed tomography results were inconclusive, describing only a liver lesion with complex feature. A laparoscopic segmentectomy with partial resection of segments IV B and V was performed to completely remove the cystic lesion, associated with cholecystectomy. Histopathological examination (Figure 2) demonstrated MCN.

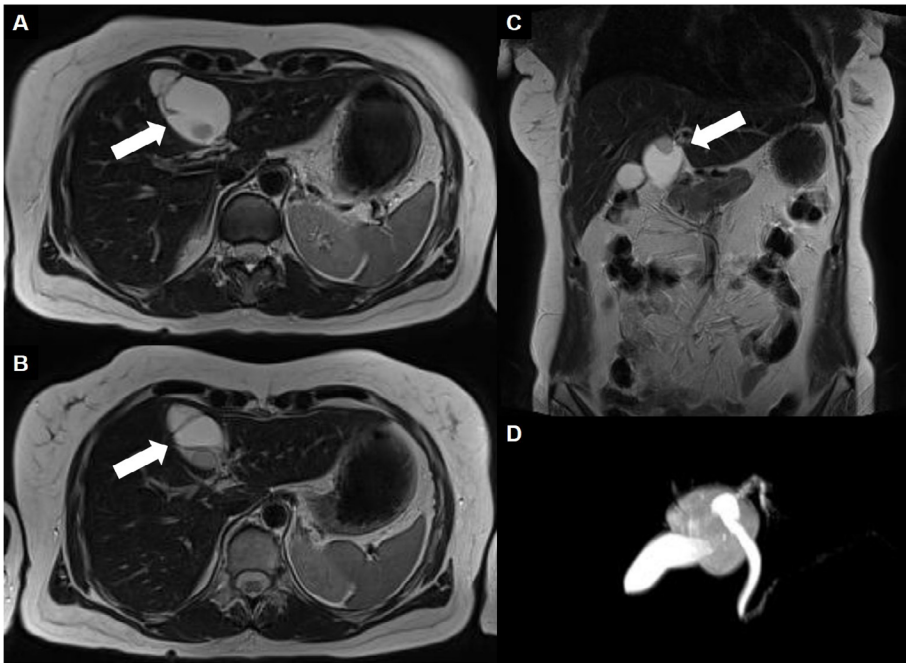

Figure 1: A, B and C: T2-weighted abdominal magnetic resonance imaging with a gadolinium-based contrast agent revealing a liver thick-walled multiseptated cystic lesion with a solid component, measuring 6.1 × 4.8 × 6.5 cm (arrows); D: Magnetic resonance cholangiography reconstruction image demonstrating the correlation of the lesion with the biliary system.

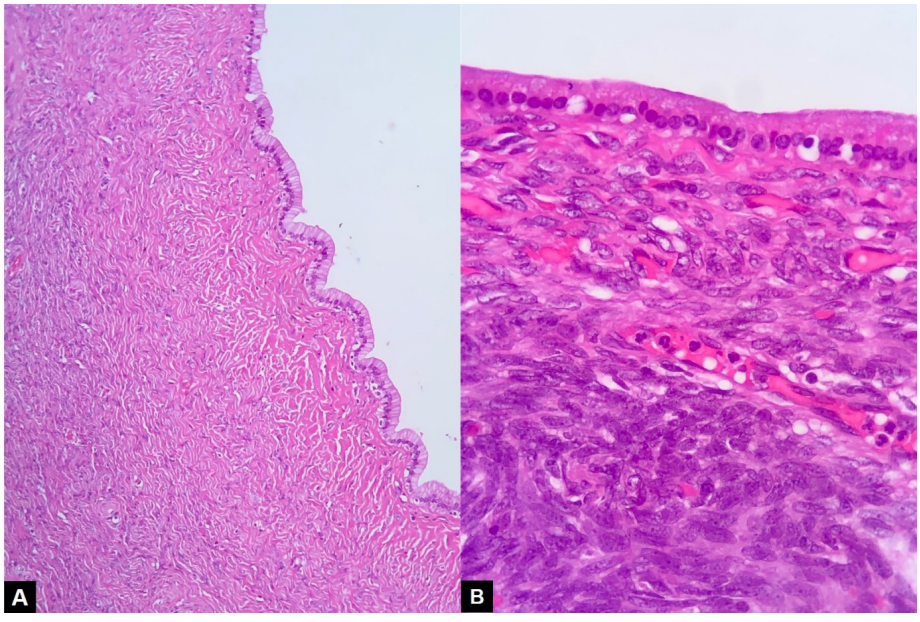

Figure 2: A: Histological image demonstrating mucinous cystic neoplasm of the liver with low-grade intraepithelial neoplasia;

B: Ovarian-like stroma below the epithelium.

Conflicts of Interest

The authors declare no conflict of interest.

REFERENCES

1. WHO Classification of Tumours Editorial Board. *Digestive system tumours*: WHO classification of tumours. 5th ed. Geneva: WHO; 2019.
2. Nagtegaal ID, Odze RD, Klimstra D, Paradis V, Rugge M, Schirmacher P, et al. The 2019 WHO classification of tumours of the digestive system. *Histopathology*. 2020;76(2):182-8.
3. Obara S, Nomi T, Yamato I, Hokuto D, Yasuda S, Nishiwada S, et al. Laparoscopic resection of a hepatic mucinous cystic neoplasm: a case report. *Int J Surg Case Rep*. 2016;24:18-21.
4. Erdogan D, Kloek J, Lamers WH, Offerhaus GJA, Busch ORC, Gouma DJ, et al. Mucinous cystadenomas in liver: management and origin. *Dig Surg*. 2010;27(1):19-23.
5. Ferreira R, Abreu P, Jeismann VB, Segatelli V, Coelho FF, David AI. Mucinous cystic neoplasm of the liver with biliary communication: case report and surgical therapeutic option. *BMC Surg*. 2020;20(1):328.

Received: Jan 31st, 2022
Accepted: Apr 25th, 2022