VOLUME - 14, ISSUE - 07, JULY - 2025 • PRINT ISSN No. 2277 - 8160 • DOI : 10.36106/gjra

Original Research Paper

Radio-Diagnosis

A CASE REPORT ON BILIARY CYSTADENOMA IN A 32-YEAR-OLD FEMALE – A RADIOLOGICAL PERSPECTIVE

Dr. Yogesh Padole* Junior Resident, Department of Radiology, Dr.VM GMC Solapur. *Corresponding Author

Dr. Amit Pendor Associate Professor, Department of Radiology, Dr.VM GMC Solapur.

Dr. Raghvendra Mali Assistant Professor, Department of Radiology, Dr.VM GMC Solapur.

ABSTRACT

Background: Biliary cystadenomas are rare, benign cystic neoplasms of the liver, constituting less than 5% of hepatic cystic lesions. Predominantly affecting middle-aged women, these tumors are of clinical importance due to their potential for malignant transformation into cystadenocarcinomas. Radiological imaging plays a crucial role in diagnosis and pre-surgical planning. **Case Presentation:** We report the case of a 32-year-old female presenting with vague epigastric pain for 2–3 months, with no associated systemic symptoms. Initial ultrasonography raised the suspicion of a pancreatic pseudocyst. However, contrast-enhanced CT of the abdomen revealed a large (11.1 x 16.2 x 12 cm), well-defined, unilocular cystic lesion in the left hepatic lobe, with thin non-enhancing walls and no internal septations or solid components. The lesion displaced adjacent organs and mildly dilated the intrahepatic biliary tree. Surgical excision was performed, and histopathological examination confirmed biliary cystadenoma. **Conclusion:** This case highlights the significance of cross-sectional imaging in identifying characteristic features of biliary cystadenoma. Early radiological diagnosis enables timely surgical intervention, preventing potential malignant transformation and recurrence.

KEYWORDS : Biliary cystadenoma, hepatic cystic lesion, contrast-enhanced CT, liver tumour, radiological diagnosis, cystic neoplasm.

INTRODUCTION

Biliary cystadenomas are rare benign cystic tumors of the liver, typically arising from intrahepatic bile ducts and comprising less than 5% of all hepatic cystic lesions. They predominantly occur in middle-aged women, often presenting with vague symptoms or being incidentally detected on imaging studies. Histologically, they are characterized by a cystic structure lined by mucin-secreting columnar epithelium and supported by a fibrous stroma. These lesions have malignant potential and are thus clinically significant even when benign-appearing on imaging. Accurate radiological characterization is essential for surgical planning and avoiding progression to cystadenocarcinoma[1-2].

Patient Profile

A 32-year-old female, presented on 14/06/2025 with a chief complaint of epigastric pain persisting for the past 2–3 months. There were no associated symptoms such as fever, jaundice, vomiting, or weight loss. Clinical examination was unremarkable. An initial abdominal ultrasonography (USG) suggested the possibility of a pseudocyst of the pancreas. However, further evaluation with contrast-enhanced CT was performed. Liver function tests and tumor markers were within normal limits.

Imaging Findings

Modality: Contrast-Enhanced CT Abdomen (P+C)

Findings:

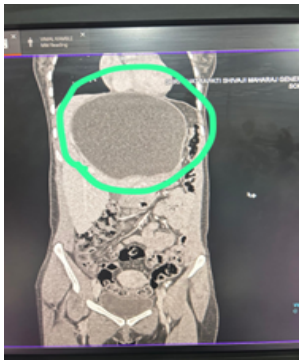

Fig.01-Cystic Lesion Occupying Left Lobe of Liver

- A well-defined, solitary, unilocular cystic lesion (11.1 x 16.2 x 12 cm) was noted in the left hepatic lobe and interlobar region.
- The lesion had a thin, smooth, non-enhancing wall with homogeneous low-density content (HU: 0–10).
- No internal septations, mural nodules, solid components, or calcifications were seen.
- No vascular encasement, lymphadenopathy, or invasion into adjacent structures was noted.
- Mild intrahepatic biliary dilatation and displacement of adjacent organs were observed.

Organ Relations:

- Anterior: Up to the anterior abdominal wall
- Posterior: Abutting the vertebral column
- Inferior: Displacing the stomach
- Lateral: Abutting bowel loops

Other viscera, including gallbladder, pancreas, spleen, kidneys, uterus, and bladder, were unremarkable. Impression: Imaging findings were consistent with biliary cystadenoma.

Surgical And Histopathological Findings

The patient underwent hepatic resection. Intraoperative findings revealed a large, unilocular, well-encapsulated cystic lesion with clear serous content. Histopathology showed a cyst wall lined with cuboidal-to-columnar epithelium overlying a fibrous stroma, confirming the diagnosis of biliary cystadenoma.

DISCUSSION

Biliary cystadenomas are uncommon and potentially premalignant lesions, most often arising in middle-aged females. Although benign, they are of clinical significance due to their ability to recur or transform into cystadenocarcinomas if not adequately managed. The typical clinical presentation involves nonspecific symptoms, and imaging often plays a vital role in early detection and surgical planning[1].On cross-sectional imaging, they appear as well-defined cystic lesions with variable internal architecture. Features favoring benignity include thin walls, absence of mural nodules, and non-enhancing internal content[2]. In our case, a large unilocular cystic lesion with these benign features was evident on CT scan. Mild biliary

dilatation and displacement of surrounding organs further pointed toward a significant mass effect, despite the lesion's benign histological nature[3].

Complete surgical excision is the treatment of choice due to risk of malignant transformation and recurrence. Histological confirmation remains the gold standard and revealed classic features of biliary cystadenoma in our case .

CONCLUSION

This case demonstrates the importance of radiological evaluation in diagnosing biliary cystadenoma. Early identification based on characteristic imaging findings facilitates timely surgical management and avoids progression to malignancy.

REFERENCES

1. Devaney K, Goodman ZD, Ishak KG. Hepatobiliary cystadenoma and cystadenocarcinoma: a light microscopic and immunohistochemical study of 70 patients. Am J Surg Pathol. 1994;18(11):1078–1091.
2. Mortelé KJ, Ros PR. Cystic focal liver lesions in the adult: differential CT and MR imaging features. Radiographics. 2001;21(4):895–910.
3. Tsui WM, Colombari R, Portmann BC, et al. Hepatobiliary cystadenoma and cystadenocarcinoma: an international collaborative study of 21 cases. Histopathology. 1995;26(4):321–330.
4. Simo KA, McKillop IH, Northup PG, et al. Surgical management of biliary cystic tumors. Am Surg. 2011;77(3):362–367.