Scholars Journal of Medical Case Reports
Abbreviated Key Title: Sch J Med Case Rep
ISSN 2347-9507 (Print) | ISSN 2347-6559 (Online)
Journal homepage: https://saspublishers.com

OPEN ACCESS

Radiology

Calcified Omental Fat Necrosis Mimicking Dropped Gallstones After Cholecystectomy: A Case Report

A. Chaali[1]*, C. Sebti[1], A. Diani[1], M. Bouroumane[1], M. Benzalim[1], S. Alj[1]

[1]Radiology Department, Ibn Tofail Hospital, Marrakech

DOI: https://doi.org/10.36347/sjmcr.2026.v14i11.022 | **Received:** 07.09.2026 | **Accepted:** 31.10.2026 | **Published:** 05.11.2026

***Corresponding author:** A. Chaali
Radiology Department, Ibn Tofail Hospital, Marrakech

Abstract | **Case Report**

Background: Omental fat necrosis is an uncommon benign condition that may develop following infarction of the omental fat. When organized and calcified, it can present as a mass-like lesion and mimic other intra-abdominal conditions, particularly after abdominal surgery. [1–4] ***Case presentation:*** A 60-year-old woman presented with abdominal pain and a palpable right periumbilical mass five months after cholecystectomy. She was hemodynamically and respiratorily stable, with mildly elevated inflammatory markers. Ultrasound demonstrated an oval, well-circumscribed hypoechoic lesion closely abutting the abdominal wall, containing hyperechoic calcifications with posterior acoustic shadowing. Contrast-enhanced CT showed an oval, predominantly hypodense lesion closely abutting the right anterolateral abdominal wall, containing calcified foci and associated infiltration of the adjacent omental fat, without significant enhancement. Given the history of cholecystectomy, dropped gallstones were considered as an important differential diagnosis. The lesion's close relationship with the abdominal wall also raised the possibility of desmoid-type fibromatosis. Surgical exploration revealed an omental collection containing necrotic tissue and calcified material. No histopathological examination was performed. Based on the imaging and intraoperative findings, organized omental fat necrosis with dystrophic calcification was considered the most likely diagnosis. ***Conclusion:*** Calcified omental fat necrosis may mimic dropped gallstones after cholecystectomy and, less commonly, an abdominal wall-associated soft-tissue tumor. Recognition of its imaging characteristics and correlation with the clinical and surgical history may help avoid misdiagnosis. [1–6]

Keywords: Omental fat necrosis, omental infarction, calcification, dropped gallstones, cholecystectomy, computed tomography.

Copyright © 2026 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution **4.0 International License (CC BY-NC 4.0)** which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

INTRODUCTION

Omental infarction and omental fat necrosis are uncommon, benign conditions resulting from ischemic injury to the omental adipose tissue. They may occur spontaneously or in association with factors such as trauma, surgery, obesity, or vascular compromise. The condition most commonly involves the greater omentum and may clinically mimic other causes of acute or subacute abdominal pain. Computed tomography [CT] plays a central role in diagnosis because it allows characterization of the fatty nature, location, morphology, and associated inflammatory changes of the lesion [1], [2].

The evolution of omental infarction may result in organization, fibrosis, and dystrophic calcification. Consequently, chronic or organized omental fat necrosis may present as a well-defined mass containing calcified foci, creating a diagnostic challenge.

This challenge is particularly relevant in patients with a history of recent cholecystectomy. Gallbladder perforation during laparoscopic cholecystectomy may lead to spillage of gallstones into the peritoneal cavity. These dropped gallstones may remain asymptomatic or cause delayed complications, including inflammatory collections, abscesses, adhesions, and granulomatous reactions. Calcified dropped gallstones may be readily identified on CT as hyperattenuating foci within or adjacent to an inflammatory collection [3].

We report an unusual case of a calcified omental lesion occurring five months after cholecystectomy and presenting as a palpable abdominal mass. The radiological appearance raised the possibility of dropped

gallstones, while the overall morphology and operative findings favored organized omental fat necrosis with dystrophic calcification.

Case Presentation

A 60-year-old woman presented with abdominal pain associated with a palpable abdominal mass. Her medical history was notable for a cholecystectomy performed five months before the current presentation. The patient was evaluated on an outpatient basis and did not present in an emergency context.

On clinical examination, the patient was hemodynamically and respiratorily stable. A localized palpable mass was identified in the right periumbilical region. Laboratory investigations showed a mild elevation of inflammatory markers. No major biological abnormality was reported.

Abdominal ultrasonography was initially performed to investigate the abdominal pain and palpable mass and revealed an oval, well-circumscribed hypoechoic lesion closely abutting the abdominal wall. The lesion contained hyperechoic foci producing posterior acoustic shadowing, consistent with calcifications.

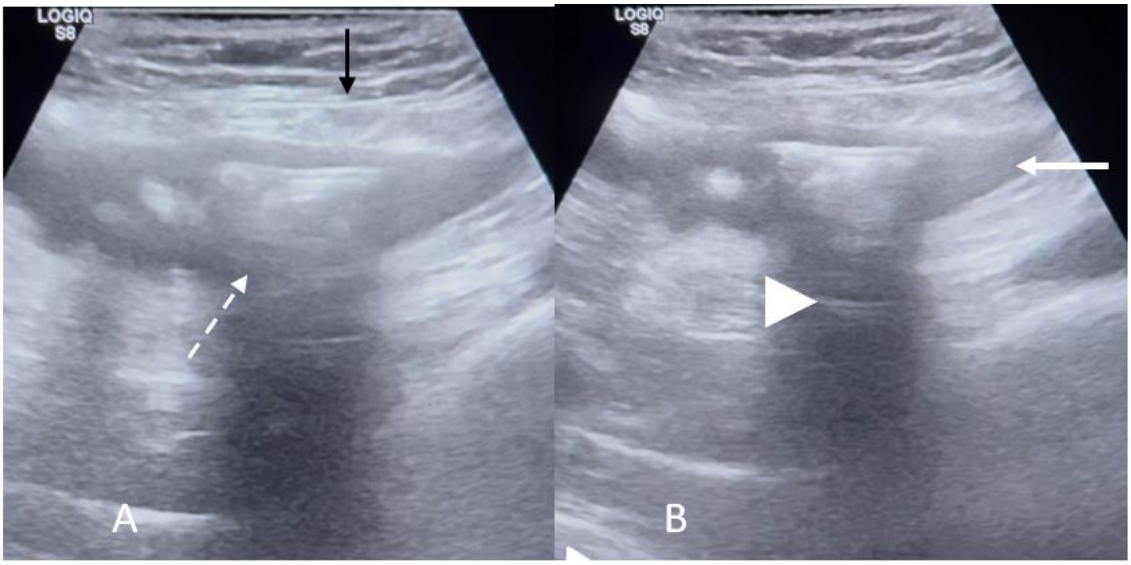


Figure 1: Ultrasound image showing [A] an oval, well-circumscribed hypoechoic lesion [dashed arrow] closely abutting the abdominal wall [black arrow], [B] containing hyperechoic calcifications [white arrow] with posterior acoustic shadowing. [head of arrow]

Contrast-enhanced abdominal CT demonstrated an oval, predominantly hypodense lesion in the anterior omental region, closely abutting the right anterolateral abdominal wall. Several spontaneously hyperdense foci compatible with calcifications were identified within the lesion. Associated infiltration of the adjacent omental fat was observed, without significant enhancement following intravenous contrast administration.

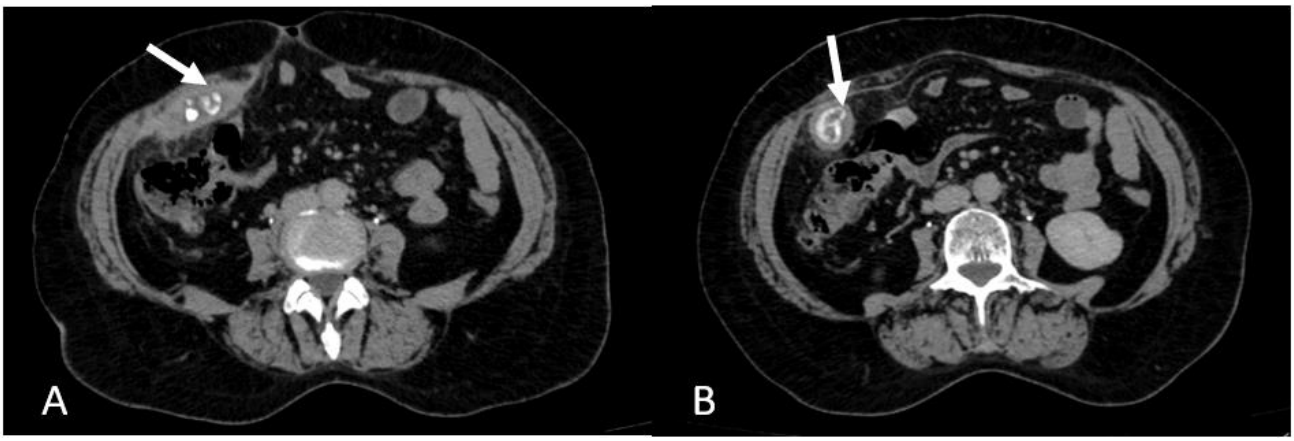


Figure 2 : Axial contrast-enhanced CT images showing an oval, predominantly hypodense lesion closely abutting the right anterolateral abdominal wall. The lesion contains several spontaneously hyperdense foci consistent with calcifications and is associated with infiltration of the adjacent omental fat. [arrows]

Given the history of recent cholecystectomy, dropped gallstones were considered as an important differential diagnosis. Desmoid-type fibromatosis was considered as a secondary differential because of the lesion's close relationship with the abdominal wall and adjacent fat infiltration.

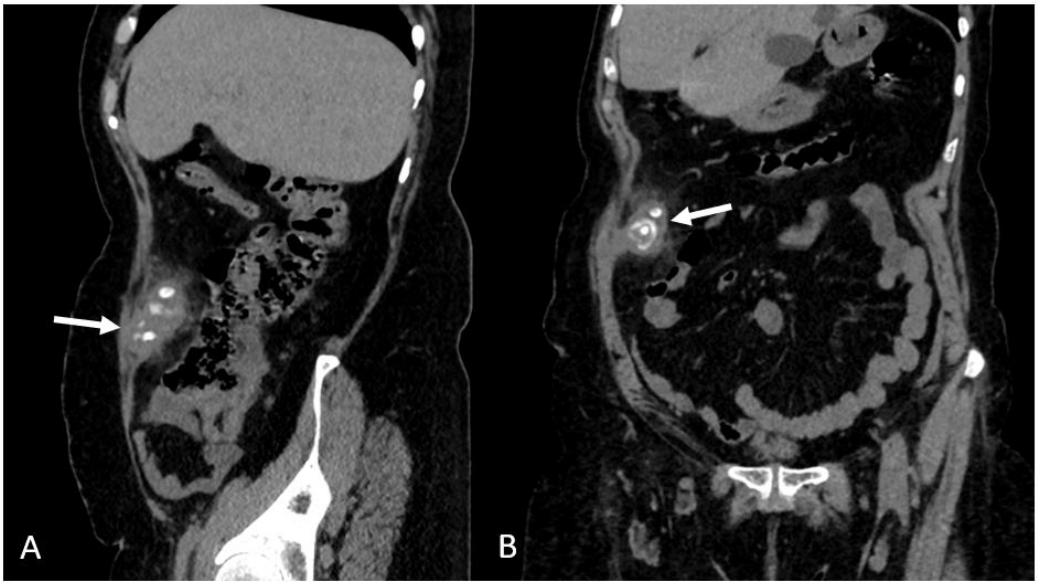


Figure 3 : Sagittal [A] and coronal [B] contrast-enhanced CT images showing the same oval, predominantly hypodense lesion abutting the right anterolateral abdominal wall, with calcifications and adjacent omental fat infiltration. [arrows] No significant enhancement is observed following intravenous contrast administration.

Surgical exploration was subsequently performed and revealed an omental collection containing necrotic tissue and calcified material. No histopathological examination was performed. In view of the imaging findings and operative appearance, the lesion was considered most consistent with organized omental fat necrosis with dystrophic calcification.

DISCUSSION

Omental fat necrosis is an uncommon benign process resulting from ischemic injury to adipose tissue. It belongs to the spectrum of intra-abdominal focal fat infarction and may result from vascular compromise, torsion, trauma, or previous surgery. Omental infarction results from vascular compromise of the omental fat and generally follows a benign course. On CT, it typically appears as a focal area of heterogeneous fat attenuation with surrounding inflammatory changes. With time, the necrotic tissue may become organized and fibrotic, producing a more mass-like appearance and, occasionally, dystrophic calcification [1–3].

This imaging appearance can closely resemble other organized intra-abdominal masses.

In our patient, the oval morphology, predominantly hypodense content, absence of significant enhancement, omental location, and presence of internal calcific foci were compatible with an organized omental fat necrosis. However, the recent history of cholecystectomy considerably complicated the radiological interpretation.

Dropped gallstones were the main alternative diagnosis because of the previous cholecystectomy. Retained or spilled gallstones may cause delayed inflammatory complications and can appear as hyperdense or calcified foci within an inflammatory mass or collection [4,5]. In our patient, however, the lesion appeared to involve the omental tissue itself, and surgery demonstrated necrotic omental tissue containing calcified material, favoring organized omental fat necrosis.

Desmoid-type fibromatosis was considered as a secondary differential because of the lesion's close relationship with the abdominal wall and adjacent fat infiltration. However, its predominantly hypodense appearance, lack of significant enhancement, and internal calcifications were less typical of a solid desmoid lesion [7–9].

The operative findings in our patient provided additional support for the diagnosis of omental fat necrosis.

The absence of histopathological confirmation represents an important limitation. Nevertheless, the combination of the imaging findings, clinical history, and intraoperative appearance strongly favored organized calcified omental fat necrosis.

This case emphasizes that the identification of calcified intra-abdominal structures following cholecystectomy should not automatically be attributed to dropped gallstones. Careful assessment of the

morphology and composition of the entire lesion, its relationship to the omentum, associated inflammatory changes, enhancement pattern, operative history, and previous imaging studies is essential for an accurate diagnosis.

CONCLUSION

Calcified omental fat necrosis is an uncommon but important imaging diagnosis that may mimic dropped gallstones after cholecystectomy [1–5]. A close relationship with the abdominal wall may also raise the possibility of a desmoid-type fibromatosis, although this should be considered a secondary differential when the imaging characteristics are atypical for a solid tumor [6–9]. Correlation with the surgical history and imaging findings is essential for establishing the most likely diagnosis.

REFERENCES

1. Kamaya A, Federle MP, Desser TS. Imaging Manifestations of Abdominal Fat Necrosis and Its Mimics. RadioGraphics. nov 2011;31[7]:2021-34. doi:10.1148/rg.317115046
2. Coulier B. Contribution of us and ct for diagnosis of intra peritoneal focal fat infarction [iffi]: a pictorial review. Journal of the Belgian Society of Radiology. 1 avr 2010;93[4]:171. doi:10.5334/jbr-btr.276
3. Javed AA, Bagante F, Hruban RH, Weiss MJ, Makary MA, Hirose K, *et al.,* Postoperative Omental Infarct After Distal Pancreatectomy: Appearance, Etiology Management, and Review of Literature. Journal of Gastrointestinal Surgery. nov 2015;19[11]:2028-37. doi:10.1007/s11605-015-2920-2
4. Kerr SF, Hyland R, Rowbotham E, Chalmers AG. Postoperative omental infarction following colonic resection. Clinical Radiology. févr 2012;67[2]:134-9. doi:10.1016/j.crad.2011.07.051
5. Nayak L, Menias CO, Gayer G. Dropped gallstones: spectrum of imaging findings, complications and diagnostic pitfalls. BJR. août 2013;86[1028]:20120588. doi:10.1259/bjr.20120588
6. Morrin MM, Kruskal JB, Hochman MG, Saldinger PF, Kane RA. Radiologic Features of Complications Arising from Dropped Gallstones in Laparoscopic Cholecystectomy Patients. American Journal of Roentgenology. mai 2000;174[5]:1441-5. doi:10.2214/ajr.174.5.1741441
7. Braschi-Amirfarzan M, Keraliya AR, Krajewski KM, Tirumani SH, Shinagare AB, Hornick JL, *et al.,* Role of Imaging in Management of Desmoid-type Fibromatosis: A Primer for Radiologists. RadioGraphics. mai 2016;36[3]:767-82. doi:10.1148/rg.2016150153
8. Okuda M, Yoshida K, Kobayashi S, Gabata T. Desmoid-type fibromatosis: imaging features and course. Skeletal Radiol. juill 2023;52[7]:1293-303. doi:10.1007/s00256-023-04275-x
9. Li S, Yuan X, Yi Z, Dai H, Yang L, Dai Z, *et al.,* Dual-phase contrast-enhanced multislice computed tomography scans play a key role in the diagnosis of abdominal wall desmoid-type fibromatoses. THC. 28 avr 2023;31:45-54. doi:10.3233/THC-236005