

Gallstones spilt at laparoscopic cholecystectomy: a new cause of intraperitoneal granulomas

C W Warren, J I Wyatt

Abstract

A case of a 32 year old woman with a foreign body-type granulomatous reaction to gallstones spilt at previous laparoscopic cholecystectomy is reported. The patient presented with hard nodules within the omentum at a subsequent Caesarean section, raising the possibility of metastatic tumour. Histological examination showed gallstones with an associated foreign body-type granulomatous reaction. With increasingly widespread use of laparoscopic surgery and relatively common spillage of gallstones at surgery, it is likely that histopathologists will encounter this condition more frequently in the future, both in surgical biopsy specimens and at necropsy.

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Keywords: laparoscopic cholecystectomy, cholelithiasis, foreign body type granuloma, omentum, peritoneal cavity.

The list of known causes of granulomatous peritonitis is long¹ and well established, but not static. The spectrum of diseases encountered in clinical practice is constantly changing, partly due to changes in clinical practice itself. Here, we present a case of an omental foreign body-type granulomatous reaction to gallstones spilt during a previous laparoscopic cholecystectomy.

Case report

A 32 year old woman was admitted for an elective Caesarean section. At the time of the operation, a number of hard nodules were noted in the omentum. The ovaries and other abdominal viscera appeared normal and the surface of the liver showed no evidence of tumour, but there was a clinical concern that these nodules may represent metastatic malignancy from an occult primary. The affected portions of omentum were therefore sent for urgent histopathological examination.

Pathological findings

Two pieces of omentum were received, the larger, 6 × 6 × 1 cm, containing several smooth nodules up to 1.5 cm in diameter with a hard cut surface. The smaller portion of tissue consisted almost entirely of a similar single nodule 2 cm in diameter. Routine histological examination showed that the nodules were deposits of apparently bile stained granular material surrounded by a foreign body-type

granulomatous response, including cholesterol clefts and fibrous tissue. These were situated within the adipose tissue of the omentum. No neoplastic tissue was identified. These nodules were considered most likely to be gallstones.

Further enquiry revealed that the woman had undergone an elective laparoscopic cholecystectomy for right upper quadrant pain associated with cholelithiasis almost two years prior to the Caesarean section. At surgery, there had been minor spillage of bile and one large gallstone fell into the peritoneal cavity. It was thought that most of the fragments had been retrieved. Postoperative recovery was uneventful and the patient was discharged from the ward after two days. She remained asymptomatic at follow up in the outpatient clinic.

Discussion

Laparoscopic cholecystectomy is probably the most significant major surgical advance in the past decade.² After its introduction in the late 1980s, its use has become increasingly widespread, to such an extent that laparoscopic cholecystectomy has now been established as the treatment of choice for symptomatic gallstones,^{2,3} being preferred to the traditional open cholecystectomy. A major analysis of the complications of laparoscopic cholecystectomy in 77 604 cases showed that significant complications occurred in only about 2% of cases and that the main problem was bile duct injury (0.6% of cases), with vascular injury and damage to the bowel or stomach accounting for most of the other significant postoperative morbidity.⁴ A review of this and other studies concluded that complications occurred in 2-6% of laparoscopic cholecystectomies and included those related to needle and trocar insertion, the establishment of the pneumoperitoneum necessary to perform the surgery, and laparoscopic instrumentation.⁵

Spillage of gallstones during laparoscopic cholecystectomy is common, possibly occurring in 20-30% of operations,⁶ and tends to happen during retraction or dissection of the gallbladder, or during its removal through the umbilical incision.⁵ However, subsequent problems are infrequent.⁴⁻⁷ The main reported sequelae involve sepsis,⁴⁻⁶ although more exotic complications such as cholelithoptysis have been reported.⁶

The case discussed here demonstrates that spilt gallstones may also mimic tumour deposits clinically and therefore come to the attention of histopathologists. Not surprisingly, gallstones elicit a granulomatous response seen histologically. There are many causes of intra-

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peritoneal granulomas including infections (tuberculosis, fungal infections and parasitic infestations), foreign material (starch, douche fluid, lubricants, fibres from surgical material, escaped bowel contents, leaked bile, ruptured ovarian cysts, and so on), and conditions such as Crohn's disease, sarcoidosis and Whipple's disease.¹ However, as far as we are aware, a granulomatous response to escaped gallstones has not been reported, partly because gallstone spillage during traditional open cholecystectomy is uncommon and, if it does occur, retrieval of stones is relatively straightforward. With the widespread use of laparoscopic cholecystectomy nowadays, foreign body granulomas due to gallstones are likely to present, albeit incidentally, to pathologists more frequently, either as surgical biopsy material or at

necropsy. Thus one more cause of intra-peritoneal granulomas needs to be added to the traditional list.

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Ulcerating rheumatoid nodule of the vulva

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Abstract

A case of an ulcerating rheumatoid nodule of the vulva in a 76 year old woman with rheumatoid arthritis complicated by Felty's syndrome is reported. The patient presented with a mass in the vulval region. On clinical examination, she had an ulcerated mass associated with inguinal lymphadenopathy. These findings resulted in a clinical diagnosis of invasive carcinoma of the vulva and an excision biopsy was carried out. On microscopic examination, the lesion showed the characteristic features of a rheumatoid nodule with ulceration of overlying epidermis. Adjacent vessels showed inflammation and fibrinoid necrosis of their walls suggestive of a vasculitis. Awareness of the possibility of ulceration in rheumatoid nodules may facilitate diagnosis and avert unduly aggressive treatment.

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Keywords: rheumatoid arthritis, rheumatoid nodule, vulva, vasculitis.

Rheumatoid nodules occur in approximately 25% of patients with rheumatoid arthritis. They are usually found in subcutaneous tissue near a joint, but may also occur at other sites, including the heart, lung, gastrointestinal tract, and synovial membrane.¹ Histologically, they are characterised by central fibrinoid necrosis surrounded by palisading histiocytes.

Here, we report a case of a rheumatoid nodule in the vulva of a woman with seropositive rheumatoid arthritis and Felty's syndrome. To

our knowledge, this is the first report in the literature of a rheumatoid nodule at this site. Additional unusual features in this case included ulceration of the overlying skin and associated lymphadenopathy, resulting in clinical mimicry of carcinoma.

Case report

A 76 year old woman with a 40 year history of rheumatoid arthritis complicated by Felty's syndrome presented with a painful swelling on the vulva. The initial clinical suspicion was of infection and antibiotic therapy was instituted. There was no resolution and over the course of the next three months the lesion enlarged. Physical examination showed a left labial mass measuring 3 × 4 cm with a 1.5 cm overlying ulcer with a raised rolled edge. There was induration of surrounding tissues and inguinal lymphadenopathy was present. The clinical diagnosis at this stage was one of invasive carcinoma and an excision biopsy of the mass was carried out.

Apart from Felty's syndrome (rheumatoid arthritis associated with splenomegaly, lymphadenopathy and neutropenia), there was no past medical history of note. No rheumatoid nodules were noted on extensor surfaces. There was no history of previous gynaecological neoplasia or surgery. There was no history of diabetes mellitus. The patient was taking 7.5 mg of prednisolone daily.

PATHOLOGY

Macroscopic features

The resection specimen consisted of an oval of hair bearing skin measuring 4.3 × 3.0 cm with

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