

## Case Report

# Treatable solitary giant port site metastasis following cholecystectomy for carcinoma gall bladder

**Nachiket Joshi<sup>1\*</sup>, Abhirup Banerjee<sup>1</sup>, Bimal Mody<sup>2</sup>, Sudeep R Shah<sup>1</sup>**

<sup>1</sup>Division of Gastro-Intestinal Surgery

<sup>2</sup>Division of Plastic Surgery, P.D. Hinduja National Hospital and Medical Research Centre, Veer Savarkar Marg, Mahim, Mumbai, India

\***Address for Correspondence:** Nachiket Joshi, Division of Gastro-Intestinal Surgery, Stepping Hill Hospital, Stockport, UK, Mobile: +44-7503412622; E mail: joshinac@gmail.com

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## ABSTRACT

Patients who are incidentally diagnosed to have carcinoma of the gall bladder following a laparoscopic cholecystectomy are potentially at risk of developing port site metastasis. Port site recurrence is often associated with peritoneal metastases. Here we have presented a case, where a single large port metastasis without peritoneal disease was excised with satisfactory outcomes in terms of surgery, cosmesis and overall survival. A 45-year old lady following a routine laparoscopic cholecystectomy was incidentally diagnosed to have adenocarcinoma of gall bladder (T2). She was then referred to our center where she had a radical cholecystectomy with nodal clearance (N0). Two years later, she presented with a large port site metastasis. PET-CT showed uptake only at the lump and attempt to downsize the tumor with chemotherapy was unsuccessful. Following excision, the 15cm defect in the anterior abdominal wall was reconstructed using a composite mesh. Skin cover was provided using a local rotation flap. Fifteen months later, the patient is disease free. Port site excision during definitive resection is not mandatory as it has not been shown to be associated with improved survival. In this case, due to absence of disease elsewhere, aggressive surgical resection was undertaken for the large port site recurrence.

**Keywords:** Carcinoma of the gall bladder; incidental gall bladder cancer; port site metastasis; port site excision.

## Introduction

Patients who are incidentally diagnosed to have carcinoma of the gall bladder following a laparoscopic cholecystectomy are potentially at risk of developing port site metastasis. Port site recurrence is associated with a dismal outcome and is often associated with peritoneal metastases [1] and therefore, routine port site resection at the time of revision surgery is not recommended. Here we have presented a case, where a single large port metastasis (with no evidence of peritoneal disease elsewhere) was excised and reconstructed using plastic surgical techniques with satisfactory outcomes.

## Case report

A 45-year old lady, following a routine laparoscopic cholecystectomy, was incidentally diagnosed to have adenocarcinoma

of gall bladder (T2- tumour invading into the peri muscular connective tissue). The gall bladder had been removed from the epigastric port. She was then referred to our center for further management. Excision of segment 4B and 5 of the liver with nodal clearance was performed. There was no residual disease in the resected specimen and none of the excised lymph nodes were involved. The patient was doing well and was advised to be on regular follow up. However, she was lost to follow-up and two years later, she presented with a large epigastric lump. PET-CT with contrast revealed a 9.5x7.8x8.7cm soft tissue mass in the epigastric region invading the muscles of the abdominal wall but with no intra-abdominal extension (Figure 1).

There was evidence of uptake only at the lump with no uptake in the surgical resection bed or elsewhere. An attempt to downsize the tumour with chemotherapy was unsuccessful. In view of the

localized nature of disease and the poor response to chemotherapy, it was decided to go ahead with surgery. On table, disease was restricted to the abdominal wall. The peritoneal surface was clear. Following excision of the mass, there was a 15cm defect in the anterior abdominal wall. This defect was reconstructed with a composite mesh using the inlay technique. Skin cover was provided using a local rotation flap (Figure 2a, 2b). The histopathology report revealed a metastatic adenocarcinoma with free margins (Figure 2c, 2d). Fifteen months later, the patient is asymptomatic and disease free.

## Discussion

Approximately 0.2-2.9% of patients who undergo a laparoscopic cholecystectomy are incidentally detected to have carcinoma of the gall bladder on histopathological examination [2]. Of these, approximately 14% develop port site recurrence [3]. This may be higher in cases

where there was bile spillage during the primary procedure, or if the gall bladder was not extracted from the abdomen in a laparoscopic retrieval bag. Port site recurrence is a poor prognostic marker as it often marks the presence of peritoneal disease. However, this is not always true, and the disease may be localized with no systemic spread, as was seen in this case.

Several theories have been put forward explaining the peritoneal tropism associated with cancer of the gall bladder. Besides those mentioned above, tumour manipulation, systemic progression of the tumour, pneumoperitoneum induced decrease in cellular immunity, multiple instruments passes through the trocars, and the 'chimney effect' (tumour implantation as a result of the pneumoperitoneum) have all been implicated in the pathogenesis [4]. Meticulously avoiding biliary spillage during the procedure and using a specimen bag for retrieval of the gall bladder may help to reduce the incidence of port site metastases.

Although there is a consensus regarding the extent of liver resection, bile duct resection and lymphadenectomy, the excision of port sites at the time of definitive surgery continues to be a controversial topic. Multiple studies, comparing the overall survival in patients who have undergone port site excision versus in those who have not, have been carried out. There was no difference in the overall survival and moreover, the port site excision group was associated with a higher incidence of incisional hernia [5]. The technique of port site excision has also been questioned with some authors stating modifications to the technique (e.g. using a trocar to guide the port site excision) to ensure no tumour is left behind [6].

However, many surgeons continue to excise port sites routinely as part of their standard protocol [7]. Large port site recurrences are uncommon and only a few cases have been reported [8]. However, these cases were associated with metastatic disease elsewhere and were not candidates for surgery. Recurrences are commonly associated with peritoneal or liver metastases [5, 8, 9], but since in this case, there was no evidence of disease elsewhere in the body, aggressive surgical resection was undertaken for the port site recurrence. The defect in the abdominal wall had to be bridged using a composite synthetic mesh and the skin defect had to be reconstructed.

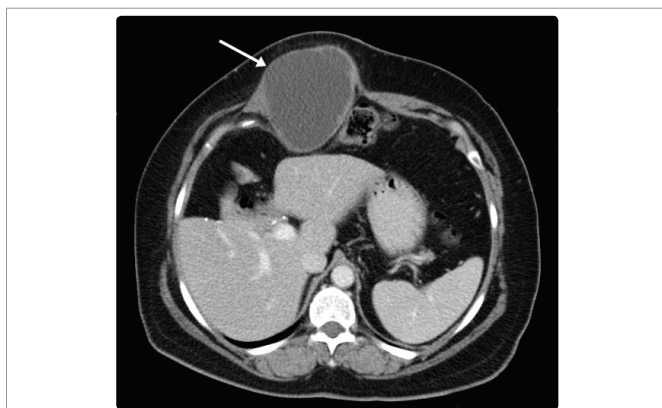
In summary, although such cases appear to provide a rationale for routine port site excision during definitive surgery, the evidence in published literature is divided on this issue. This case is unique since there was no disease elsewhere despite the large size of the port site recurrence. Consequently, radical surgery for patients with localized disease in the form of a single large port site metastasis (following definitive surgery for incidentally detected gall bladder cancer) may be justified as it provides satisfactory symptom relief, cosmesis and overall survival.

**Conflict of Interest:** The authors have no conflicts of interest to declare.

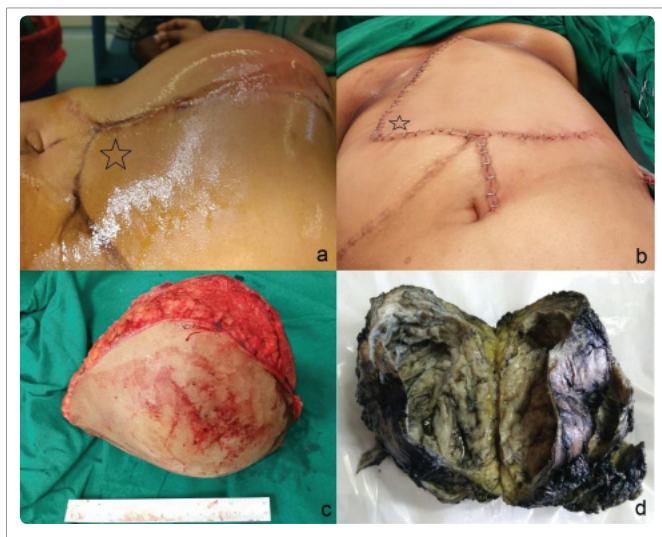
**Informed consent:** Informed consent was obtained from the individual included in the study.

## References

1. Ricardo AE, Feig BW, Ellis LM, Hunt KK, Curley SA, et al. (1997) Gallbladder cancer and trocar site recurrences. *Am J Surg* 174: 619-622. Link: <https://bit.ly/2R5U5u5>
2. Toyonaga T, Chijiwa K, Nakano K, Hirokazu N, Koji Y, et al. (2003)



**Figure 1:** Contrast enhanced CT scan of the abdomen showing a large soft tissue mass (arrow) within the anterior abdominal wall in the epigastric region.



**Figure 2a-d:** a: Pre-operative photograph demonstrating the mass in the epigastric region. b: Intra-operative photograph following excision of the mass and plastic surgical reconstruction. c: Excised epigastric port site metastasis with overlying skin. d: Sectioning of the mass revealed a 17x15x11cm cystic mass containing a thick yellowish fluid.

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- Completion radical surgery after cholecystectomy for accidentally undiagnosed gallbladder carcinoma. *World J Surg* 27: 266-271. Link: <https://bit.ly/331xq82>
3. Paolucci V (2001) Port site recurrences after laparoscopic cholecystectomy. *J Hepatobiliary Pancreat Surg* 8: 535-543. Link: <https://bit.ly/3jWPebn>
  4. Fuks D, Regimbeau JM, Pessaux P, Bachellier P, Raventos A, et al. (2013) Is port-site resection necessary in the surgical management of gallbladder cancer? *J Visc Surg* 150: 277-284. Link: <https://bit.ly/2Ze610W>
  5. Maker AV, Butte JM, Oxenberg J, Deborah Kuk, Mithat Gonen, et al. (2012) Is port site resection necessary in the surgical management of gallbladder cancer? *Ann Surg Oncol* 19: 409-417. Link: <https://bit.ly/3jRSjcx>
  6. Giuliani F, Ardito F, Vellone M, Gennaro C, Gennaro N (2006) Port-sites excision for gallbladder cancer incidentally found after laparoscopic cholecystectomy. *Am J Surg* 191: 114-116. Link: <https://bit.ly/2QWwJHq>
  7. Rathanaswamy S, Misra S, Kumar V, Chintamani, Jaipalreddy P, et al. (2012) Incidentally detected gallbladder cancer- the controversies and algorithmic approach to management. *Indian J Surg* 74: 248-254. Link: <https://bit.ly/3bvjgQi>
  8. Singla S, Singla S, Budhiraja S (2009) Port site metastasis after laparoscopic cholecystectomy. *Indian J Surg* 71: 41-42. Link: <https://bit.ly/3h3L1kd>
  9. Hu JB, Sun XN, Xu J, Chao H (2008) Port site and distant metastases of gallbladder cancer after laparoscopic cholecystectomy diagnosed by positron emission tomography. *World J Gastroenterol* 14: 6428-6431. Link: <https://bit.ly/3bADY1o>