

CASE REPORT

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Uninvited Guest in the House: A Rare Case of Metastatic Gallbladder Cancer

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Abstract

Gallbladder cancer is a rare malignancy. About 1–2% of surgical specimens demonstrated a gallbladder cancer as an incidental finding. Metastasis to ovaries by biliary origin, known as Krukenberg tumour, though known, is infrequent. It can mimic clinically and morphologically, as a primary ovarian tumour challenging the diagnosis. Diagnosis of secondary ovarian tumours though its challenging often misdiagnosed as primary ovarian cancer, specifically mucinous adenocarcinomas. The distinction from the latter is essential, as it requires different treatment. Immunohistochemistry plays an important role in distinguishing primary ovarian tumours from extra-ovarian metastases. Detailed diagnostic laparotomy with examination of upper abdomen, IHC and UGI scopy evaluation plays a major role in identifying the primary tumour and make the correct diagnosis. As treatment varies according to primary, detailed evaluation might help in deciding appropriate palliative chemotherapy.

Keywords: Krukenberg tumour; Gall bladder cancer; Immunohistochemistry; UGI scopy; Metastatic gallbladder cancer; Ovarian metastasis; Ovarian mass

Introduction

Gallbladder cancer is a rare malignancy. Often it is detected as an incidental finding on imaging or after a surgical procedure. About 1–2% of surgical specimens demonstrated a gallbladder cancer as an incidental finding¹. Most patients are often asymptomatic at presentation. Hence most of them are locally well advanced or metastatic at diagnosis. The tumour is thought

to spread via lymphatic, hematogenous or trans-coelomic pathway. Metastasis to ovaries by biliary origin, known as Krukenberg tumour, though known, is infrequent. Only a few cases have been reported². It can mimic clinically and morphologically, as a primary ovarian tumour challenging the diagnosis. Due to its rarity in these belts, here we report a patient with metastatic gallbladder carcinoma.

Case summary

History

A 50-year-old post-menopausal female presented to nearby hospital with acute abdomen pain and abdominal distension for 2 days. There was no history of fever, weight loss, loss of appetite, or early satiety. CECT of the abdomen showed the thickened gall bladder. Patient underwent emergency diagnostic laparotomy. Intra-operatively, bilateral ovarian mass and multiple deposits noted in peritoneal surfaces and. On detailed intraoperative examination, incidentally they found gall bladder wall irregular thickening with mass lesion. They performed total abdominal hysterectomy+bilateral salpingoopherectomy+ cholecystectomy + omentum +pelvic lymph node +peritoneal random bites and referred to us for further treatment. On abdominal examination, soft non-tender soft. Laparotomy scar present and healed. Breast examination was unremarkable.

Investigations

CECT abdomen and pelvis showed gallbladder is not visualized along with post total abdominal hysterectomy+bilateral salpingoopherectomy status with thick-walled cystic lesion noted in bilateral iliac region largest one measuring 64x45mm on right side and 30x22mm on left side s/o metastatic necrotic lymphnodes. Histopathological examination report revealed moderately differentiated adenocarcinoma of gallbladder with high grade epithelial malignancy possibly adenocarcinoma along with metastatic deposits on omentum. 1/26 pelvic lymphnode shows metastatic deposits. Pathologist reported as metastatic gallbladder with Krukenberg tumour. However, pathologist have requested for IHC. Due to poor preservation of surgical specimen from the operating surgeon, we couldn't perform IHC. Tumour marker CA 125 was 5.5 Units.

MANAGEMENT: Case was discussed in tumour board and diagnosed as Krukenberg tumour secondary to gallbladder carcinoma. Patient received 4 cycles of palliative chemotherapy with gemcitabine and cisplatin regimen. She is symptom free now.

Discussion

Diagnosis of secondary ovarian tumours though its challenging often misdiagnosed as primary ovarian cancer, specifically mucinous adenocarcinomas. The distinction from the latter is essential, as it requires different treatment. Newly diagnosed pelvic masses patients suspected of ovarian cancer should be considered for gastroscopy As per the NCCN guideline. As ovarian cancer is prone to disseminate in the abdominal cavity, in which the digestive tract is most vulnerable, and detailed preoperative evaluation is quite important³. Also it has been reported that about 3.2%~7.0% of ovar-

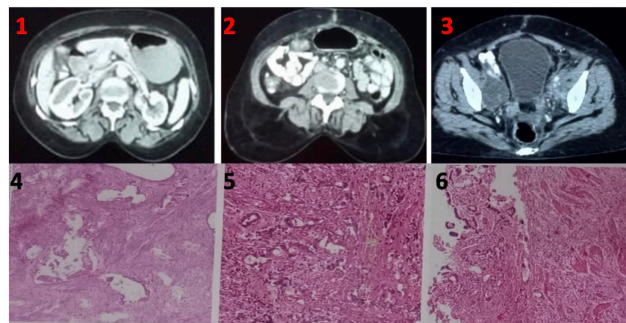


Fig 1. Post operative CECT abdomen(1,2 & 3) and pelvis and Postoperative H&E staining of Gall bladder and ovary specimen (4, 5, & 6)

ian tumours are metastasized from the stomach or colon⁴. Gastrointestinal endoscopy findings will allow more sufficient preoperative preparation for these patients.

The detailed surgical staging is paramount important in accurate staging of pelvic adnexal masses. The detailed careful inspection and palpation of all peritoneal surfaces and sampling of any suspicious areas peritoneal washing for cytology analysis; infra-colic omentectomy; the right and left paracolic gutters, the pouch of Douglas, the bladder peritoneum and the pelvic side walls; and removal of para-aortic and pelvic lymph nodes along with the upper abdomen blind peritoneal biopsy sampling of the right hemidiaphragm.

Immunohistochemistry plays an important role in distinguishing primary ovarian tumours from extra-ovarian metastases. One recent comparative study revealed several factors that can be key in helping to differentiate primary ovarian from Krukenberg tumors⁵. Primary ovarian cancer is often strongly positive for CK7 and negative for CK20. On the contrary, metastatic gastric cancer is less CK7 positive but is positive for CK20. Colorectal cancers are CK7 negative but CK20 positive. As observed primary ovarian cancer patients are slightly older at 65 years versus 52 years for Krukenberg patients. Ovarian tumours with mucin stain are similar to Krukenberg tumours. They also stain positive for chromogranin and synaptophysin, which can differentiate them from Krukenberg tumours.

Radical surgery is the only treatment that can cure completely^{6,7}. After surgery, adjuvant capecitabine-based chemotherapy (CT) and radiotherapy (RT) are recommended options, in particular in the presence of risk factors of early relapse such as R1 resection or nodal-positive disease^{8,9}.

Conclusion

Detailed diagnostic laparotomy with examination of upper abdomen, IHC and UGI scopy evaluation plays a major role in identifying the primary tumour and make the correct diagnosis. As treatment varies according to primary, detailed

evaluation might help in deciding appropriate palliative chemotherapy.

Ethical approval

Ethical approval obtained from institutional ethics committee.

Author contribution

Dr. Santhosha kulal designed and wrote the paper, Dr.Manjunath G N and Dr.Abhay K Kattapur performed review; all the authors read and approved the final manuscript.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

References

- 1) Bray F, Ferlay J, Soerjomataram I, Siegel RL, Torre LA, Jemal A. Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA: A Cancer Journal for Clinicians*. 2018;68(6):394–424. Available from: <https://doi.org/10.3322/caac.21492>.
- 2) Jarvi K, Keltz CJ, Thomas WEG, Gillespie A. Bilateral ovarian metastases from carcinoma of the gallbladder. *Gynecologic Oncology*. 2006;103(1):361–362. Available from: <https://doi.org/10.1016/j.ygyno.2006.05.033>.
- 3) Liu G, Yan J, Long S, Liu Z, Gu H, Tu H, et al. Is Routine Gastroscopy/Colonoscopy Reasonable in Patients With Suspected Ovarian Cancer: A Retrospective Study. *Frontiers in Oncology*. 2021;11:608999. Available from: <https://doi.org/10.3389/fonc.2021.608999>.
- 4) Fujiwara K, Ohishi Y, Koike H, Sawada S, Moriya T, Kohno I. Clinical Implications of Metastases to the Ovary. *Gynecologic Oncology*. 1995;59(1):124–128. Available from: <https://doi.org/10.1006/gyno.1995.1278>.
- 5) Xie H, Erickson BJ, Sheedy SP, Yin J, Hubbard JM. The diagnosis and outcome of Krukenberg tumors. *Journal of Gastrointestinal Oncology*. 2021;12(2):226–236. Available from: <https://doi.org/10.21037/jgo-20-364>.
- 6) Aloia TA, Járufe N, Javle M, Maithel SK, Roa JC, Adsay V, et al. Gallbladder Cancer: expert consensus statement. *HPB*. 2015;17(8):681–690. Available from: <https://doi.org/10.1111/hpb.12444>.
- 7) Lee SE, Jang JY, Lim CS, Kang MJ, Kim SW. Systematic review on the surgical treatment for T1 gallbladder cancer. *World Journal of Gastroenterology*. 2011;17(2):174–174. Available from: <https://doi.org/10.3748/wjg.v17.i2.174>.
- 8) Horgan AM, Amir E, Walter T, Knox JJ. Adjuvant Therapy in the Treatment of Biliary Tract Cancer: A Systematic Review and Meta-Analysis. *Journal of Clinical Oncology*. 2012;30(16):1934–1940. Available from: <https://doi.org/10.1200/jco.2011.40.5381>.
- 9) Cao T, Zhang HS, Sada Q, Chai YH, Curley C, Massarweh SA, et al. The role of surgery and adjuvant therapy in lymph node-positive cancers of the gallbladder and intrahepatic bile ducts. *Cancer*. 2018;124:74–83. Available from: <https://doi.org/10.1002/cncr.30968>.