Metastatic Breast Cancer Presenting as Biliary Obstruction

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Introduction & Background

Cholecystectomy is a common surgical consult. We present the case of a patient with invasive lobular carcinoma (ILC) with metastasis to the duodenum presenting as biliary obstruction. Duodenal metastasis is often difficult to diagnose and associated with a dismal prognosis. The objective of this poster is to review the presentation, diagnosis, and treatment of breast cancer with duodenal metastases.

Case Presentation

A 72-year-old female presented to the ED with vague abdominal pain, PO intolerance, and constipation for about ten days She had a remote history of stage IIB, ER/PR+, HER-2/neu negative ILC of the left breast status post mastectomy with positive lymph node sampling followed by completion axillary dissection. Physical exam was notable for midepigastric abdominal pain without radiation and mild distention; no jaundice or scleral icterus was noted. Labs were significant for AST/ALT 228/209 U/L, normal total bilirubin levels, and elevated lipase to 275 U/L.

The differential diagnosis at this time was choledocholithiasis, hepatitis, CBD stricture, or a tumor in the biliary and/or pancreatic system causing the obstruction. Further workup included a RUQUS, CT abdomen/pelvis and ultimately an MRCP (Figure 1), each study showed dilatation of the biliary system. An upper endoscopy was then performed which revealed a friable, oozing, peri-ampullary mass that was snare biopsied.

While pending pathology results, LFTs increased to the 1000s and total bilirubin increased to 2.7 mg/dL. General surgery was consulted for a cholecystectomy. However biliary decompression was recommended instead while pending pathology results. After the tube was placed, she experienced relief of abdominal pain, normalization of labs, and eventual return of appetite.

Pathology resulted as metastatic carcinoma, mammary in origin. Patient received a port that admission with plans to initiate taxol chemotherapy in the near future.

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Figures

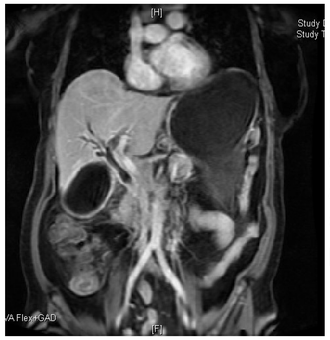

Figure 1:
MRCP showing gallbladder distention without gallstones, intra- and extra-hepatic ductal dilation, CBD dilatation to 13mm, and main pancreatic ductal dilatation to 5mm.

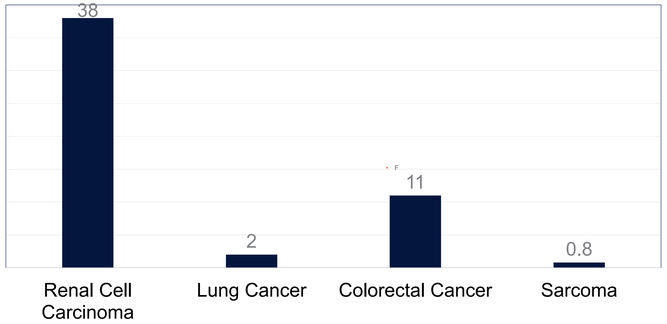

Figure 2: Percentage of the most common metastases to the biliary tree

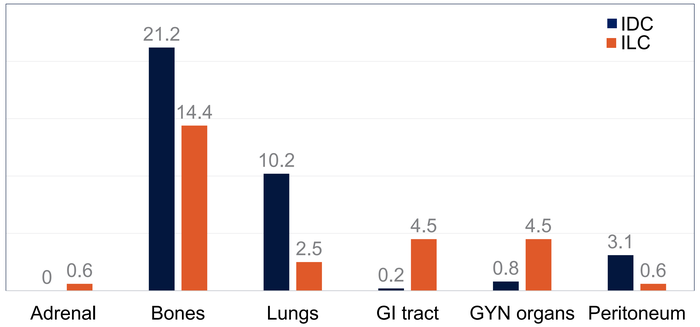

Figure 3: Metastatic pattern for IDC and ILC

Discussion

Biliary obstruction is most commonly due to gallstones, cholangitis, strictures, or malignancy. Figure 2 displays the most common metastases to the biliary tree[1]. While metastases to the duodenum are rare, it is even more rare for it to be breast cancer: only 0.3% of cases[2]. Seventy-five to 85% of breast cancer is invasive ductal carcinoma (IDC), but ILC is more likely to spread to the GI tract (Figure 3).[2,3]

When a patient with history of breast cancer has a biliary obstruction, an upper endoscopy is the best diagnostic tool, but is usually not the first test done. Once tissue has been obtained, breast biomarkers ER, PR, and GATA3 can stain the tissue to confirm breast origin.[2]

A cholecystectomy is one the most common operations a general surgeon performs, however, it may not always be indicated. This case was challenging due to the history of breast cancer and the pending peri-ampullary mass results. Treatment of metastatic breast cancer with metastasis to the duodenum includes:

- Medical
  - Biliary decompression with a stent or cholecystostomy tube
  - Re-staging of disease and chemotherapy
- Surgical
  - Whipple (if surgically fit with optimistic prognosis)
  - Gastrojejunostomy for palliation

Conclusion

Breast cancer with metastasis to the duodenum can present with vague abdominal symptoms. Workup warrants an upper endoscopy with tissue diagnosis. Treatment includes biliary decompression and re-staging of disease status.

References

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