CASE REPORT – OPEN ACCESS

International Journal of Surgery Case Reports 24 (2016) 60–62

Contents lists available at ScienceDirect

International Journal of Surgery Case Reports

journal homepage: www.casereports.com

A case report of symptomatic gallbladder disease in the setting of peritoneal carcinomatosis originating from invasive lobular carcinoma of the breast

David Brinkman, Subhasis Misra, Nail Aydin*

Department of Surgery, Texas Tech University Health Sciences Center, 1400 South Coulter Street, Amarillo, TX, 79106-1786, USA

ARTICLE INFO

Article history:
Received 2 May 2016
Accepted 4 May 2016
Available online 9 May 2016

Keywords:
Gallbladder disease
Peritoneal carcinomatosis
Invasive lobular breast
Case report

ABSTRACT

INTRODUCTION: Invasive lobular carcinoma is the second most common type of breast cancer, responsible for 5–15 percent of all cases. Peritoneal carcinomatosis secondary to breast cancer is a rare event, frequently resulting in morbidity and mortality. Symptomatic gallbladder disease in the setting of peritoneal carcinomatosis originating from invasive lobular carcinoma of the breast is a very rare event and is not well covered in literature.
PRESENTATION OF CASE: A 44 year old female patient previously diagnosed with stage IV invasive lobular carcinoma of the left breast with widespread systemic metastases and peritoneal carcinomatosis presented with a three week history of right upper quadrant pain trigged by food intake only, greatly diminishing her quality of life. She had spent almost a year in a progression free disease status but was now suffering from debilitating symptomatic gallbladder disease. Despite the extent of her peritoneal carcinomatosis, she elected to undergo a laparoscopic cholecystectomy.
DISCUSSION: We are presenting a rare case of symptomatic gallbladder disease in the setting of peritoneal carcinomatosis secondary to invasive lobular carcinoma. A major concern is tumor load within nearby portal structures. Even though laparoscopic cholecystectomy could be a viable option to treat the condition, it needs to be applied selectively and very cautiously in the respective patient population.
CONCLUSION: Symptomatic gallbladder disease in the setting of peritoneal carcinomatosis secondary to invasive lobular carcinoma is an uncommon presentation to surgeons. A diagnostic laparoscopy is the preferred initial evaluation. If deemed feasible, and if the surgeon has the required experience, a laparoscopic cholecystectomy can be undertaken selectively.

© 2016 The Author(s). Published by Elsevier Ltd on behalf of IJS Publishing Group Ltd. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

1. Introduction

Invasive lobular carcinoma of the breast, is the second most common type of breast cancer, responsible for 8–14% of breast cancer cases [1,2]. Lobular carcinomas often fail to form distinct masses and can be difficult to detect through screening [3]. It also shows a very aggressive, invasive nature, and a tendency to have widespread distant unusual metastases to the gastrointestinal tract, peritoneum, and retroperitoneum [4]. Peritoneal carcinomatosis originating from breast cancer is a very rare event which frequently results in morbidity and mortality [5]. Symptomatic gallbladder disease in the setting of peritoneal carcinomatosis originating from invasive lobular carcinoma of the breast is a very rare event and its management is not well covered in surgical literature.

2. Presentation of case

Our patient is a 44 year old female with a past medical history of stage IV infiltrating lobular carcinoma of the left breast with distant metastases to the vertebrae and peritoneal carcinomatosis. In March of 2014 she presented to the emergency department for complaints of abdominal pain and feelings of abdominal fullness after eating small meals for the previous 6–8 weeks. She had a strong family history of breast cancer in her paternal grandmother and maternal aunt. Physical exam revealed significant left nipple retraction but no palpable breast lesions. There was palpable left axillary lymphadenopathy reported as feeling “matted” and her right breast was normal in appearance and examination. A CT of chest, abdomen and pelvis revealed multiple bone lesions consistent with metastatic disease and ascites. An MRI revealed a left breast mass with matted axillary lymph nodes. Further workup after the MRI included a breast core biopsy done during her admission diagnosed the patient with invasive lobular carcinoma stage IV grade 1–T3, N1, M1, ER/PR positive. Her breast cancer had been treated with neoadjuvant chemotherapy, left modified radical

* Corresponding author.
E-mail addresses: david.g.brinkman@ttuhsc.edu (D. Brinkman), subhasis.misra@ttuhsc.edu (S. Misra), nail.aydin@ttuhsc.edu, naydin@icloud.com (N. Aydin).

http://dx.doi.org/10.1016/j.ijscr.2016.05.007
2210-2612/© 2016 The Author(s). Published by Elsevier Ltd on behalf of IJS Publishing Group Ltd. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

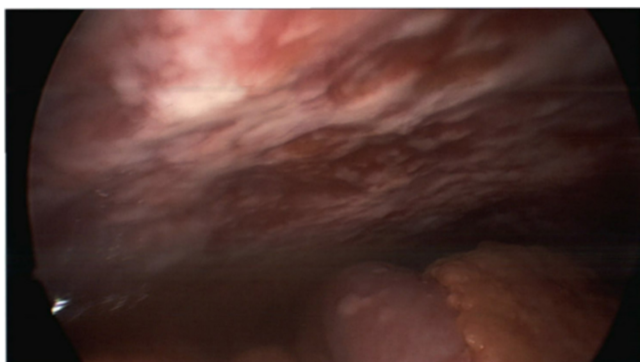

Fig. 1. Peritoneal carcinomatosis.

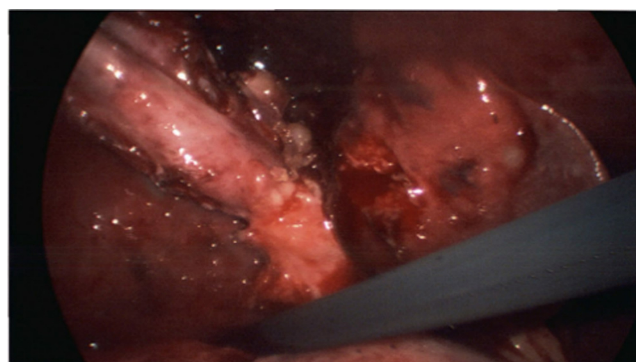

Fig. 3. Gallbladder stuck to liver.

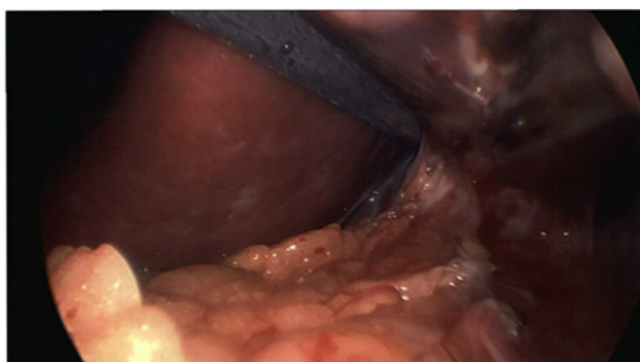

Fig. 2. Gallbladder stuck to duodenal ligament.

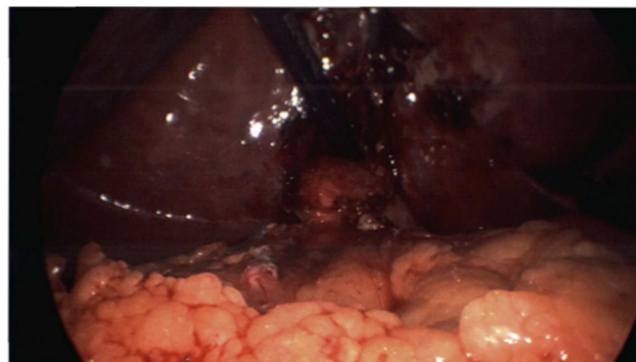

Fig. 4. After removal of gallbladder.

mastectomy, and adjuvant chemoradiation therapy. Due to her widespread metastatic disease, she was not a candidate for cytoreductive surgery and hyperthermic intraperitoneal chemotherapy for her peritoneal carcinomatosis. She responded well to her treatment regimen, resulting in a progression free status for almost a year.

She presented in August of 2015 with a two month history of intermittent right upper quadrant pain triggered by food intake which became more frequent over the course of time, greatly diminishing her quality of life and restricting her oral intake. A hepatobiliary scan showed both cholecystitis and biliary dyskinesia. A right upper quadrant ultrasound found non mobile stones and biliary sludge with trace amount of pericholecystic fluid and a positive Murphy's sign. A laparoscopic cholecystectomy in the setting of peritoneal carcinomatosis was recommended. Intraoperative findings showed diffuse peritoneal carcinomatosis and a gallbladder stuck to duodenum, duodenal ligament, and liver (Figs. 1 and 2). The gallbladder was densely fused, however with meticulous dissection, successfully removed without any problems (Figs. 3 and 4). Post-operatively the patient's symptoms completely resolved and she was able to resume an oral diet. Her quality of life increased greatly and she was able to continue her adjuvant radiochemotherapy.

Table 1
Timeline of patient presentation and intervention.

March 2014	Diagnosed with stage IV invasive lobular carcinoma of the left breast Starts neoadjuvant chemotherapy
August 2014	Left breast modified radical mastectomy
September 2014	Adjuvant chemoradiation therapy began with additional endocrine therapy
August 2015	Patient has been in a progression free status for almost a year. Presents to our clinic with 3 week history of right upper quadrant pain greatly affecting her quality of life. Patient elects to undergo laparoscopic cholecystectomy. All symptoms resolve post cholecystectomy. The patient resumed her adjuvant chemoradiation and endocrine therapy

3. Discussion

Invasive Lobular Carcinoma is a very aggressive form of breast cancer. It can be difficult to detect on physical exam or on mammography. The typical sites of breast cancer metastases are lymph nodes, chest wall, skeletal system, and the central nervous system; however, lobular carcinoma may spread to the gastrointestinal tract, peritoneum, and retroperitoneum. Peritoneal carcinomatosis frequently causes morbidity and mortality. Current recommendations for treatment of peritoneal carcinomatosis are cytoreductive surgery and hyperthermic intraperitoneal chemotherapy in highly selective cases [6]. In our case, the patient's widespread extra-abdominal disease prohibited her candidacy for this treatment. Despite having widespread systemic metastatic disease, the patient's breast tumor was positive for ER/PR which lead her to respond well to endocrine therapy and remain progression free for almost a year. Although our patient had late stage breast cancer, adjuvant endocrine therapy has shown to reduce the risk of recurrence and death in women with early hormone receptor positive breast cancer [7]. In the case of late stage breast cancer with distant metastases, race and receptor status were shown to be powerful prognosticators for overall survival largely owing to their strong prognostic values in predicting survival after distant recurrence [8]. However, the patient suffered from debilitating symptomatic gallbladder disease which significantly diminished her quality of life. Even though laparoscopic cholecystectomy could be a viable option to treat the condition, it needs to be applied selectively and very cautiously in the patient population. The possibility of massive

tumor involvement of the porta hepatis, lesser sac and possible encasement of portal triad, lesser omentum, and, retrohepatic vena cava is a major concern when considering surgical treatment of this gallbladder disease [9]. A diagnostic laparoscopy is the preferred method of evaluation before surgery to be presented to these patients. If deemed feasible and if the experience of the surgeon allows to proceed with laparoscopic cholecystectomy, this can be undertaken in selective cases provided that findings on exploration allow for proceeding with removal of the gallbladder (Table 1).

4. Conclusion

Symptomatic gallbladder disease is an everyday presentation to surgeons with a readily available cure – cholecystectomy. Symptomatic gallbladder disease in the setting of peritoneal carcinomatosis secondary to invasive lobular carcinoma is not only a very rare event but also not well reviewed in literature. A major concern when considering surgical treatment of this specific symptomatic gallbladder disease is the possibility of massive tumor involvement of portal structures. It is our recommendation, based upon the case we present here that the initial approach should be an initial diagnostic laparoscopy. If intraoperative findings allow for removal of the gallbladder and if the surgeon has the necessary experience then a laparoscopic cholecystectomy can be performed. We felt that our experience gained from this case, although representative of a very select patient population, could guide future surgeons who may encounter a similar situation.

Conflict of interest

None.

Funding

None.

Ethical approval

Not applicable.

Consent

Yes, consent was obtained on all patients in this study.

Author contribution

Mr. David Brinkman – Involved in analysis of patient and literature, manuscript preparation. He approved the final form of the manuscript.

Dr. Nail Aydin – Involved in treatment of patient. Conceived the case report. Involved in analysis of patients and literature and manuscript preparation. He approved the final form of the manuscript.

Dr. Subhasis Misra – Involved in treatment of patient. Involved in analysis of patients and literature and manuscript preparation. He approved the final form of the manuscript.

Guarantor

Dr. Nail Aydin.

Acknowledgement

None.

References

[1] V. Martinez, J.G. Azzopardi, Invasive lobular carcinoma of the breast: incidence and variants, Histopathology 3 (1979) 467–488.

[2] C. Jacobs, M. Clemons, C. Addison, S. Robertson, A. Arnaout, Issues affecting the loco-regional and systemic management of patients with invasive lobular carcinoma of the breast, Breast J. (2016) 45–53.

[3] A. Reed, J.R. Kutasovic, S.R. Lakhani, P.T. Simpson, Invasive lobular arcinoma of the breast: morphology, biomarkers and 'omics, Breast Cancer Res. (2015) 17.

[4] M.T. Shakoor, S. Ayub, R. Mohindra, Z. Ayub, A. Ahad, Unique presentations of invasive lobular breast cancer: a case series, Int. J. Biomed. Sci. (2014) 287–293.

[5] M. Tuthill, R. Pell, R. Guiliani, A. Lim, M. Gudi, K.B. Contractor, et al., Peritoneal disease in breast cancer: a specific entity with an extremely poor prognosis, Eur. J. Cancer (2009) 2146–2149.

[6] M. Cardi, P. Sammartino, M.L. Framarino, D. Biacchi, E. Cortesi, S. Sibio, et al., Treatment of peritoneal carcinomatosis from breast cancer by maximal cytoreduction and HIPEC: a preliminary report on 5 cases, Breast (2013) 845–849.

[7] G. Schiavon, I.E. Smith, Status of adjuvant endocrine therapy for breast cancer, Cancer Res. (2014) 206.

[8] Z. Ren, Y. Li, T. Shen, O. Hameed, G.P. Siegal, S. Wei, Prognostic factors in advanced breast cancer: race and receptor status are significant after development of metastasis, Pathol. Res. Pract. (2016) 24–30.

[9] N. Aydin, A. Sardi, V. Milovanov, Approach to the porta hepatis during cytoreductive surgery: technical considerations, Ann. Surg. Oncol. (2016) 552–555.

Open Access

This article is published Open Access at sciencedirect.com. It is distributed under the IJSCR Supplemental terms and conditions, which permits unrestricted non commercial use, distribution, and reproduction in any medium, provided the original authors and source are credited.