ACQUIRE

Journal of Case Reports and Medical History

(ISSN: 2831-7416) *Open Access*

Case Report Volume 5 – Issue 2

Primary Peritoneal Serous Papillary Carcinoma Misdiagnosed as Ovarian Cancer: A Case Report and Literature Review

Lyafi Yasmine*,1, Benrahhal Sanaa[1], Hachimi Dounia[1], Moutaabide Rihab[1], Jalal Mohammed[2], Boufettal Houssine[2], Mahdaoui Sakher[2] and Samouh Naima[2]

[1] Resident Physician, Department of Gynecology and Obstetrics, at Ibn Rochd University Hospital, Casablanca, Morocco

[2]Professor in the Department of Gynecology and Obstetrics at the Ibn Rochd University Hospital in Casablanca, Morocco

***Corresponding author:** Lyafi Yasmine, Resident Physician, Department of Gynecology and Obstetrics, Ibn Rochd University Hospital, Casablanca, Morocco

Received date: 18 Feb, 2025 | **Accepted date:** 03 March, 2025 | **Published date:** 27 March, 2025

Citation: Yasmine L, Sanaa B, Dounia H, Rihab M, Mohammed J, et al. (2025) Primary Peritoneal Serous Papillary Carcinoma Misdiagnosed as Ovarian Cancer: A Case Report and Literature Review. J Case Rep Med Hist 5(2): doi https://doi.org/10.54289/JCRMH2500109

Abstract

Serous papillary peritoneal carcinoma (SPPC) is a rare tumor, often mistaken for ovarian cancer due to their clinical and histological similarities. It primarily affects postmenopausal women and presents as peritoneal carcinomatosis without significant ovarian involvement. Preoperative diagnosis is challenging, and histopathological analysis is essential to confirm the diagnosis.

We present the case of a 44-year-old woman with chronic pelvic pain. After clinical and radiological examinations, surgical exploration revealed a well-defined mass on the left pelvic wall. Histopathological analysis confirmed a diagnosis of primary peritoneal serous papillary carcinoma. This case highlights the peritoneum as a potential primary site of malignancy, and its management should be similar to ovarian cancer.

Keywords: Papillary, Serous, Peritoneum, Ovary, CA¬125

Abbreviations: SPPC: Serous Papillary Peritoneal Carcinoma

Introduction

Serous papillary carcinoma of the peritoneum is a rare tumor, often mistaken for ovarian cancer due to their clinical and histological similarities. It predominantly affects postmenopausal women and presents as peritoneal carcinomatosis without significant ovarian involvement.

Case Report

We presented this case report to highlight that the peritoneum can also be a primary site of malignancy and that it is diagnosed and treated in a manner similar to primary ovarian cancer. Preoperative diagnosis of this condition is challenging, and histopathological analysis is essential to confirm the diagnosis.

This is a 44-year-old female patient who consulted for chronic pelvic pain She did not report any previous medical conditions, including significant gynecological issues or relevant family history.

The onset of symptoms dates back to eight months ago, characterized by chronic, non-cyclic pelvic pain without digestive or urinary symptoms and no abnormal uterine bleeding, all evolving in a context of preserved general health.

On general examination, the patient was in good hemodynamic condition. Abdominal examination revealed non-distended but diffusely tender abdomen without any palpable mass.

Gynecological examination was unremarkable. Pelvic ultrasound revealed a normal-sized uterus large, oval-shaped mass with a mixed composition in the left adnexa with a normal-sized uterus. The mass measured 80 × 67.5 mm and extended over 100 mm. It was associated with a moderate amount of peritoneal effusion, located in the left iliac fossa and between bowel loops, with a partly echoic content.

Pelvic MRI suggested a suspicious 9 cm latero-uterine left-sided tumor, likely of ovarian origin. The CA125 level was elevated at 516.10.

Given this suspicious clinical and radiological presentation, a laparoscopic surgical exploration was performed. Intraoperatively, a well-circumscribed, multilobulated mass with both solid and cystic components was identified, arising from the left lateral pelvic wall, measuring 9 × 8 cm. The uterus and bilateral adnexa were atrophic and free of any pathological involvement. Examination of the omentum, liver, and diaphragm revealed no macroscopic lesions. No peritoneal carcinomatosis nodules were detected in the upper peritoneal cavity. There was no evidence of lymphadenopathy in the pelvic, pericolic, or para-aortic regions.

A complete resection of the mass was performed, along with systematic peritoneal staging biopsies, omentectomy, and bilateral ovarian sampling. Histopathological analysis confirmed the diagnosis of primary serous papillary carcinoma of the peritoneum. The postoperative course was uneventful, and the surgical report was provided to the patient. She was subsequently referred to the oncology department at Ibn Rochd University Hospital for further management and oncologic follow-up.

Discussion

Serous papillary carcinoma of the peritoneum is a rare malignant epithelial tumor that is histologically indistinguishable from serous ovarian papillary carcinoma **[1-3]**.

Typically, PSPC gives rise to dissemination on the peritoneal surface and greater omentum in its early phase of growth. Furthermore, it is not uncommon to observe tumor implants on the surface of the liver, diaphragm or mesentery **[4]**.

As serous adenocarcinomas constitute the majority of malignant tumours arising from the ovary or fallopian tube, a gynaecologic diagnostic work-up is promptly instituted in a female patient with serous peritoneal deposits or serous malignant ascites. In 80–90% of cases, a clinical, radiological or pathological diagnosis of stage III–IV ovarian adenocarcinoma is established. However, in 10–15% of cases, no malignant pathology is evident in the ovaries, fallopian tubes or uterus, in which case a diagnosis of serous papillary peritoneal carcinoma (SPPC) is made **[2]**.

Patients with serous papillary peritoneal cancer have typically been treated in the same way as those with stage III/IV ovarian cancer and have often been included in ovarian cancer clinical trials.

Management of patients with SPPC generally consisted of surgical debulking and cytotoxic chemotherapy. As emphasized above, optimal debulking at surgery was often problematic: in chronologically older series, the rate of minimal residual disease (maximum deposits < 1 cm) **[5–9]**. Zivanovic reported a significant increase in optimal cytoreduction in patients with bulky upper abdominal tumour after 2001 40 G. Pentheroudakis, N. Pavlidis / Critical Reviews in Oncology/Hematology 75 (2010) 27–42 (40% before 2001 vs. 78% after 2001; $p < 0.001$) **[8]**.

This progress, along with the advent of taxane/platinum regimens, translated to quoted median survival times of 35–40 months in patients with stage III/IV SPPC. Although these data show at first glance that optimal debulking is important for long term disease control, not all series confirm this finding. In several series, debulking status was not prognostic for outcome, though the small sample size and often heterogeneous surgical management in terms of expertise and

aggressiveness make it unsafe to draw firm conclusions. Moreover, it is possible that biologically aggressive tumours are the ones with diffuse high-volume peritoneal spread which are ultimately difficult to debulk: this would make the tumour biology rather than debulking status the defining parameter for patient outcome **[7]**.

Conclusion

Primary peritoneal serous papillary carcinoma (SPPC) is a rare and challenging condition that closely mimics ovarian cancer both clinically and histologically. This case highlights the difficulty in preoperatively diagnosing SPPC and underscores the importance of histopathological analysis for accurate identification. Despite its similarities to ovarian cancer, SPPC requires specific attention as it is managed in a manner comparable to ovarian malignancies. Early detection and proper surgical and oncological management are key to improving prognosis and patient survival **[9]**.

References

1. Bloss JD., Liao SY., Buller RE., et al. Extraovarian peritoneal serous papillary carcinoma: a case-control retrospective comparison to papillary adenocarcinoma of the ovary. Gynecol Oncol. 1993;50(3):347–351. [PubMed]
2. Killackey MA., Davis AR. Papillary serous carcinoma of the peritoneal surface: matched case comparison with papillary serous ovarian carcinoma. Gynecol Oncol. 1993;51(2):171–174. [PubMed]
3. Zhou J., Iwasa Y., Konishi I., et al. Papillary serous carcinoma of the peritoneum in women: a clinicopathologic and immunohistochemical study. Cancer. 1995;76(3):429 – 436. [PubMed]
4. Bloss JD., Brady MF., Liao SY., Rocereto T., Partridge EE., Clarke-Pearson DL. Extraovarian peritoneal serous papillary carcinoma: a phase II trial of cisplatin and cyclophosphamide with comparison to a cohort with papillary serous ovarian carcinoma a Gynecologic Oncology Group Study. Gynecol Oncol. 2003;89(1):148–54. [PubMed]
5. Lele SB., Piver MS., Matharu J., Tsukada Y. Peritoneal papillary carcinoma. Gynecol Oncol. 1988;31:315–20. [PubMed]
6. Mills SE., Andersen WA., Fechner RE., Austin MB. Serous surface papillary carcinoma. A clinicopathologic study of ten cases and comparison with stage III/IV ovarian serous carcinoma. Am J Surg Pathol. 1988;12:827–34. [PubMed]
7. Strnad CM., Grosh WW., Baxter J., et al. Peritoneal carcinomatosis of unknown primary site in women. A distinctive subset of adenocarcinoma. Ann Intern Med. 1989;111:213–7. [PubMed]
8. Dalrymple JC., Bannatyne P., Russell P., et al. Extraovarian peritoneal serous papillary carcinoma. A clinicopathologic study of 31 cases. Cancer. 1989;64:110–5. [PubMed]
9. Fromm GL., Gershenson DM., Silva EG. Papillary serous carcinoma of the peritoneum. Obstet Gynecol. 1990;75:89–95. [PubMed]