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Case Report
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Unilateral Malignant Pleural Effusion without Pleural Carcinosis in Endometrial Carcinoma - An Unusual Presentation

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Abstract

We present a case of a 70 years old woman, with a very atypical presentation of endometrial cancer, she presented with dyspnea, and no abnormal genital bleeding. During CT scan and VATS, we could not find any signs of pleural or lung metastatic disease, but we found malignant cells in the pleural fluid, to the best of our knowledge, this is the first report of cytologic malignant cells confirmation without pleural carcinosis in a patient with endometrial carcinoma clinical stage IVB, with peritoneal carcinomatosis concurrent with malignant ascites confirmation too.

Keywords: Pleural effusion; Endometrial cancer; Without pleural carcinosis; Carcinomatosis; Serous papillary

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Introduction

Endometrial carcinoma is the most common gynecological neoplasm, and its presentation is often in early stages (abnormal genital bleeding), however, only 2% to 4% of the cases are disseminated at the diagnosis; this, usually occurs with lymphatic nodes disease (pelvic, para-aortic), but there are atypical sites, like extra-abdominal metastases, specifically intra thoracic having several types: Solitary or multiple pulmonary nodules, lymphangitic carcinomatosis, tumoral emboli, endobronchial metastases, and pleural effusion [1].

Ii is very important to mention, that there are pleural involvement (visceral and parietal) and cytologic confirmation, but, to the best of our knowledge, this is the first report of cytologic malignant cells confirmation without pleural carcinosis in a patient with endometrial carcinoma clinical stage IVB, with peritoneal carcinomatosis concurrent with malignant ascites confirmation too.

Case Presentation

This is the case of a 70 year old female, without hereditary oncologic background, controlled systemic hypertension. Her symptoms began in May 2020, with dyspnea and orthopnea, secondary left massive pleural effusion, and abdominal perimeter growing, both clinical situations progressive. She denied abnormal genital bleeding. ECOG 3, clinical left pleural effusion, ascites without tension, gynecological exploration negative. We made approach with CT scan thorax and abdomen, with the findings of pleural effusion without parenchymal lung metastases, without pleural thickening, and

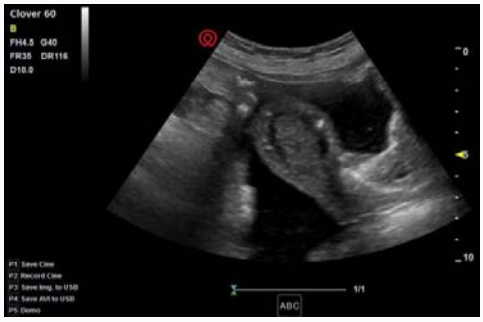

Figure 1: Sagittal US image of the uterus reveals marked endometrial thickening associated with free fluid in pelvic cavity.

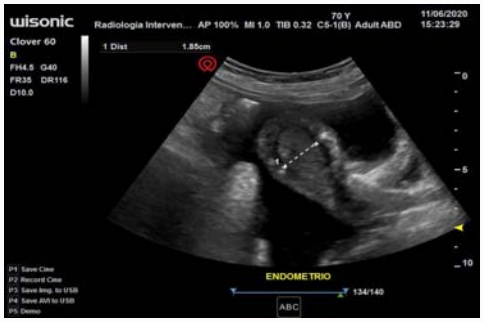

Figure 2: Sagittal US image of the uterus shows a thickened echo genic endometrium with thickness of 18.5 mm.

peritoneal carcinomatosis with uterine enlargement. Transvaginal echography shows endometrial thickness with 18.5 mm associated with free fluid in abdominal cavity (Figure 1 and 2). Thoracentesis, paracentesis and endometrial office biopsy were done, revealing papillary serous adenocarcinoma. With multidisciplinary tumor board (surgical oncologist, medical oncologist, pneumologist, thoracic surgeon) we decided to make Video Assisted Thoracic Surgery (VATS) for histologic confirmatory diagnosis and as palliative procedure for her respiratory symptoms with systematic pleurectomy, physical, surgical and chemical pleurodesis, and the findings were only pleural effusion, no lung entrapment or lung parenchymal metastases, no visceral and no parietal pleura involvement.

Pathology report

Pleural biopsy without tumoral activity with inflammation (Figure 3 and 4), cytologic analysis with metastatic papillary adenocarcinoma cells (CK7+/PAX8+/WT1+/CA125+) (Figure 5 and 6). With symptoms relief, the patient went to systemic chemotherapy with carboplatin (AUC5: 440 mg/paclitaxel 175 mg/m^2: 280 mg every 3 weeks), 4 cycles, with clinical complete response, CT scan pleural effusion and ascites had disappeared with measurable disease confined to the uterus and no peritoneal carcinomatosis data. Tumor board consider her surgical candidate, she took to debulking surgery with optimal cytoreduction (total abdominal hysterectomy, bilateral salpingo-oophorectomy, peritoneal washing, retroperitoneal lymphadenectomy, and omentectomy); pathology showed: Uterine serous papillary adenocarcinoma without myometrial invasion, lympho vascular infiltration present, both ovaries with stromal infiltration of serous papillary adenocarcinoma, greater omentum and peritoneal washing with malignant cells of serous papillary adenocarcinoma. No lymphatic nodules involvement. The plan is to continue adjuvant chemotherapy for 2 additional cycles to complete

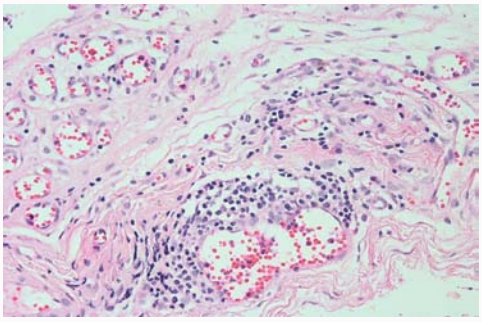

Figure 3: 40x Hematoxilin-eosin. Pleural biopsy shows vascular proliferation and chronic inflamation. There were not neoplastic glands involving the pleura.

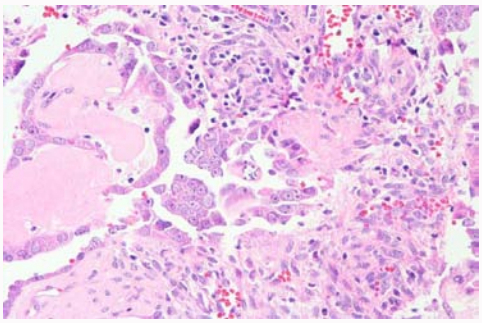

Figure 4: 40x Hematoxiline-eosine. Serous papillary carcinoma founded within an endometrial polyp located at the uterine istmus.

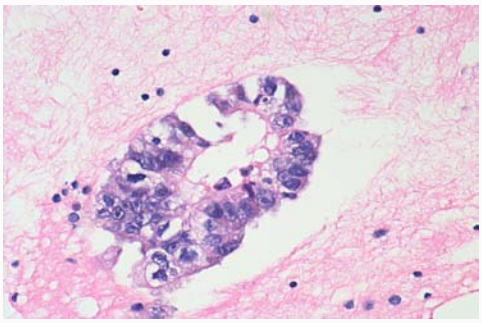

Figure 5: 40x Hematoxilin-eosin. Cellular block of pleural fluid. Neo plastic cells forming glands. They have vesicular nuclei and prominente nucleoli.

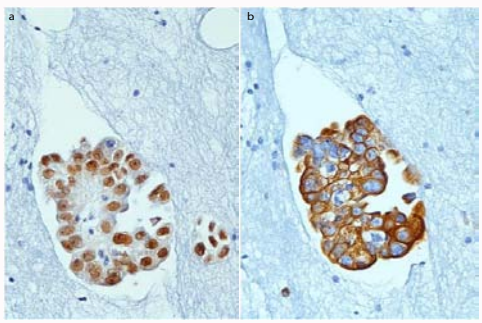

Figure 6: Immuno histochemical stains. 40x. a: PAX-8 and b: Cytokeratin 7. There was strong expression of citoplasmic cytokeratin 7 and strong nuclear expression of the transcription factor PAX-8.

6 cycles. We consider the relevance to this communication for the concurrent presentation with unilateral pleural effusion without pleural involvement (parietal and visceral) and without lung

parenchymal affection, with peritoneal carcinomatosis, in a stage IV endometrial carcinoma with aggressive subtype.

Discussion

Endometrial Carcinoma (EC) is the most common malignant tumor of the female tract, and only 2% to 4% are disseminated at the diagnosis (mostly aggressive subtypes, as clear cell and serous papillary). Usually the EC has a lymphatic involvement with pelvic and para-portico nodules affection, and hematogenous spread to distant organs. There are few studies with the full description of pleural and/or lung metastases incidence. Bristow et al. reported 45% of cases with EC and extra-abdominal disease, with pleural cytology positive and previously Bransheid et al. [4] in 414 patients found 2.2% of uterine and ovarian primary tumors [2-4]. Several years ago, it was believed that the metastatic carcinoma to the pleura, in more than 50% of the cases were of endobronchial tumoral emboli in the pulmonary artery, suggesting terminal disease, even it was thought that bilateral affection was related to hepatic metastases [4].

The pleural fluid is produced about 0.26 ml/kg/day body weight, and when there is an imbalance between production and absorption, results in pleural effusion, for example in the cases of metastatic disease, there are carcinosis, with malignant cells on the parietal and visceral pleura, encouraging the abnormal production of pleural fluid, often with lung parenchymal metastases in the elderly stages of the malignant disease with dismal prognosis. It has been estimated the 15% of malignant neoplasm can develop pleural effusion as a resultant pleural and/or pulmonary invasion for cancers of the thorax and extra thoracic sources as colorectal, kidney, gastric, pancreatic, prostate, and genital tract [5]. It is important to mention, that, it is most common to find lung metastases than only pleural affection, obviously with pleural effusion, so, the malignant cells can reach this location by direct extension or systemic spread or, even through lymphatic channels in the diaphragm, and they have several types of presentation:

a. Solitary pulmonary nodule

b. Multiple pulmonary nodules

c. Tumoral emboli

d. Endobronchial metastases

e. Pleural effusion.

These lung metastases are the principal location of extra pelvic dissemination in EC, with 2.3% to 4.6%, or even 25% of the other gynecological cancers, and the parenchymal nodules are the most common finding (30% to 60% by uterine tumors) in the metastatic lung disease, tending to be peripheral, multiple, basal location, in high blood flow areas, or even, there can be cavitation. But the only pleural affection with pleural effusion, nodularity or thickness is an infrequent finding [6-10].

The peritoneal cavity has a dynamic state of the peritoneal fluid, with circulation thanks to the breathing movements, peristalsis and abdominal pressure fluctuation, and absorption through the lymphatics channels on the right diaphragm; its oncologic relevance data from 961, with Morton et al., being the first to report malignant cells in peritoneal washings [11].

There is no consensus (respect a qué?) in patients with concurrent malignant pleural effusion and malignant ascites in the metastatic settings, however, the management of the present case, is according with the palliative procedures like pleurodesis, pleurectomy, etc. and the use of cytotoxic systemic therapy with chemotherapy [12].

Conclusion

EC is the most common gynecological neoplasm and the mostly affected in the metastatic context, the thoracic cavity, with lung and pleural disease, with parenchymal invasion (mainly aggressive subtypes).

The most interesting finding in this case was the absence of pleural and parenchymal lung affection, having only cytologic as thoracic as abdominal metastases confirmation, considering the possibility of spread through lymphatic channels on the left side diaphragm, another important issue, with only one pleural cavity affected. There would be necessary to implement pleural biopsy (parietal and visceral) and cytologic examination to rule out or confirm ser, for its optimal management.

References

1. Kishore M, Kaushal M, Ahuja A. Endometrial carcinoma with pleural fluid metastasis: A rare phenomenon. Cytojournal. 2018;15:25.
2. Graff B, Kato D, Schmidt RA, Ek M, Ferry Ja, Muntz HG, et al. Uterine papillary serous carcinoma: Patterns of metastatic spread. Gynecol Oncol. 1994;54(3):264-8.
3. Semczuk A, Skomra D, Rybajad P, Jeczen R, Rechberger T. Endometrial carcinoma with pleural metastasis. A case report. Acta Cytol. 2006;50(6):697-700.
4. Branscheid D, Bischoff H, Branscheid C, Vogt-Moykopf I. Treatment of pleural metastases in an interdisciplinary concept. Langenbecks Arch Chir Suppl II Verh Dtsch Ges Chir. 1990;789-93.
5. Meyer PC. Metastatic carcinoma of the pleura. Thorax. 1966;21(5):437-43.
6. Migliore M, Milosevic M, Koledin B. Pleural carcinosis caused by extrathoracic malignancies. AME Med J. 2020;1-8.
7. Shital P, Mirza M, Kadam M. Thoracic manifestations of gynecological tumors: Airway and lung parenchymal involvement commoner in endometrial and ovarian cancers while pleural and interstitial involvement is predominant in cervix malignancies. Eur J Gen Med. 2018;15(1):16-26.
8. Kurra V, Krajewski KM, Jagannathan J, Glardino A, Berlin S, Ramaiya N. Typical and atypical metastatic sites of recurrent endometrial carcinoma. Cancer Imaging. 2013;13(1):113-22.
9. Bouros D, Papadakis K, Siafakas N, Fuller AF. Patterns of pulmonary metastasis from uterine cancer. Oncology. 1996;53(5):360-3.
10. Sakr L, Maldonado F, Greillier L, Dutau H, Loundou A, Astoul P. Thoracoscopic assesment of pleural tumor burden in patients with malignant pleural effusion. Prognostic and therapeutic implications. J Thorac Oncol. 2011;6(3):592-7.
11. Avdalovic M, Chan A. Thoracic manifestations of common nonpulmonary malignancies of women. Clin Chest Med. 2004;25(2):379-90.
12. Takimoto R. Malignant pleural and peritoneal carcinomatosis treatment. Ann Oncol. 2012;23(Suppl 11):xi65.