DOI - 10.37951/CEREM-V2I1-19-21

CASE REPORT

MALIGNANT BREAST NEOPLASM WITH POSSIBLE PLEURAL METASTASIS: A CASE REPORT

WANESSA RABELO[1], ALLINE SILVA , VITÓRIA BRAGA[1], IZABELLA GRACIANO[1], MIGUEL COUTINHO[1].

ABSTRACT

Introduction: In patients diagnosed with breast cancer, distant metastases occur mainly in the brain, lungs, liver and bones. With regard to cases of pulmonary metastasis, neoplastic pleural effusions are common and are associated with a worse prognosis2,3, and for diagnosis the analysis of pleural fluid is used, in addition to biopsy results of the parietal pleura. Early diagnosis and treatment of malignant pleural effusion are essential to promote a better quality of life for patients with advanced cancer. Case report: female patient, 52 years old, diagnosed with malignant breast cancer diagnosed in 2004. Undergoing surgical and chemotherapy treatment of the tumor. Evolved with recurrent pleural effusion secondary to probable pleural metastasis, which interfered with the patient's quality of life. Relief and diagnostic thoracentesis was performed at first with evidence of good pulmonary expandability at control chest x-rays after the procedure. Therefore, we opted to perform videothoracoscopic pleuroscopy, pleurodesis with sterile talc, pleural biopsy and thoracoscopy with closed pleural drainage in a water seal. The patient evolved well in the postoperative period and showed excellent results after the procedure. Discussion: Pleural effusion due to metastatic malignancy causes significant impairment of respiratory function, compromising the quality of life of patients, due to strenuous symptoms such as dyspnea, chest pain, anorexia and weight loss. Although a cure is not possible, palliative treatment performed successfully, as in the case presented above, allows months to years of productive life, avoiding the need for hospitalization and recurrent thoracentesis.

KEYWORDS: PLEURAL METASTASIS; MALIGNANT NEOPLASM; BREAST CANCER; PLEURODESIS, MALIGNANT PLEURAL EFFUSION.

INTRODUCTION

The incidence of breast cancer in the world, according to the latest worldwide estimate, in the year 2018, indicates 2.1 million new cases. In Brazil, it is assumed that for each year of the 2020-2022 triennium there will be 66,280 new cases of breast cancer. This increase in the incidence rate is due to the best strategies for early detection, increased diagnostic capacity and improvements in cancer care. Malignant neoplasm of the female breast, disregarding non-melanoma skin tumors, is the most frequent tumor in all regions of Brazil, with an estimated risk of 45.24 per 100 thousand in the Midwest Region[1]. Distant metastases in patients diagnosed with breast cancer occur mainly in the brain, lungs, liver and bones. With regard to cases of lung metastasis, neoplastic pleural effusions are common and are associated with a worse prognosis[2,3]. In these cases, pleural fluid analysis is used for diagnosis to identify malignant cells, in addition to biopsy results of the parietal pleura, which provide evidence of the spread or progression of the primary disease, with a consequent reduction in the expectation and quality of life. Early diagnosis and treatment of malignant pleural effusion are essential to promote a better quality of life for patients with advanced cancer.

CASE REPORT

A 52-year-old female patient was admitted to the emergency room (ER) of the Hospital das Clínicas of the Federal University of Goiás (HC-UFG) with dyspnea, due to long-standing minimal efforts, which had worsened two days before. She referred numerous visits to the ER with this same complaint, with repeated thoracentesis due to pleural effusion with cytology suggesting neoplasia. She had a previous history of breast cancer treated in 2004 with total mastectomy, axillary emptying and breast reconstruction in 2005, in addition to bone metastasis under treatment with xeloda. Relief thoracentesis was then performed with the removal of 2 liters of serous fluid. A chest X-ray after thoracentesis is shown in Figure 2 with good lung expansion. The patient was admitted for pleurodesis. She brought a control CT scan of the chest shown in figure 1, which showed a moderate hydropneumothorax on the right, associated with atelectatic bands

1. Universidade Federal de Goiás

ADDRESS
Wanessa Rabelo
E-mail: wanessarabelo12345@gmail.com

in the right lower lobe, also noting some areas of ground glass adjacent to the atelectasis area, pleural effusion, increased lymph nodes in number in the mediastinal chains with associated adenomegalies, the largest being subcarinal. These findings favor the possibility of neoplastic involvement secondary to the previously known neoplastic comorbidity. She underwent videothoracoscopic pleuroscopy, pleurodesis with sterile talc, pleural biopsy and thoracoscopy with closed pleural water seal drainage. There was a favorable evolution in the immediate postoperative period, chest X-ray shown in Figure 3, with pleura almost entirely on the periphery. Respiratory and motor physiotherapy were intensified, asymptomatic patient, drainage of 200 ml of serous aspect, discharged to return in one week to the clinic. The patient remains asymptomatic, undergoing chemotherapy again and awaiting the result of a pleural biopsy.

DISCUSSION

Pleural effusion due to metastatic malignancy causes significant impairment of respiratory function in many people, compromising the quality of life of patients, due to strenuous symptoms such as dyspnea, chest pain, anorexia and weight loss. Although a cure is not possible, palliative treatment performed successfully, as in the case presented above, allows months to years of productive life, avoiding the need for hospitalization and repeated thoracentesis[2,4]. Successful palliative treatment requires the obliteration of the pleural space, either by pleurectomy or by antineoplastic, antimicrobial or radioisotope agents. Pleurodesis, as performed in this case, fuses the parietal and visceral pleura, leading to the obliteration of that space, and thus preventing the accumulation of fluid. The detailed mechanism of this procedure is unknown, but it is suspected that inflammation or fibrosis by activating the transforming growth factor beta plays a crucial role[3].

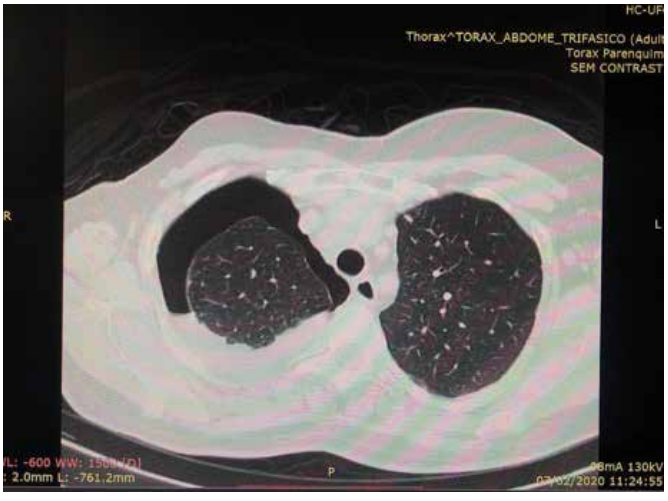

Figure 1: Moderate hydropneumothorax associated with pleural effusion on the right.

Figure 2: Anteroposterior chest x-ray after relief thoracentesis.

Figure 3: Anteroposterior chest x-ray in the immediate postoperative period of laparoscopic pleuroscopy, pleurodesis with sterile talc, pleural biopsy and thoracoscopy with closed pleural water seal drainage.

REFERENCES

1. Instituto Nacional de Câncer José Alencar Gomes da Silva. Estimativa 2020: incidência de câncer no Brasil / Instituto Nacional de Câncer José Alencar Gomes da Silva. – Rio de Janeiro : INCA, 2019.
2. Santos Giovana Tavares dos, Prolla João Carlos, Camillo Natália Dressler,

Zavalhia Lisiane Silveira, Ranzi Alana Durayski, Bica Claudia Giuliano. Fatores clínicos e anatomopatológicos que influenciam a sobrevida de pacientes com câncer de mama e derrame pleural neoplásico. J. bras. pneumol. [Internet]. 2012 Aug [cited 2020 June 08] ; 38(4): 487-493. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1806- 37132012000400011&lng=en. http://dx.doi.org/10.1590/S1806-37132012000400011.

3. Kristijan Skok, Gaja Hladnik, Anja Grm, Anton Crnjac. Malignant Pleural Effusion and Its Current Management: A Review. Medicina 2019, 55, 490; doi:10.3390/medicina55080490. Disponível em: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6723530/pdf/medicina-55-00490.pdf.
4. Terra R M, Costa P B, Dela Vega A J M, Araujo P H X N, Teixeira L R, Pêgo- Fernandes P M: Analysis of Quality of Life after Pleurodesis in Patients with Malignant Pleural Effusion. Respiration 2019;98:467-472. doi: 10.1159/000502029. Disponível em: https://www.karger.com/Article/Abstract/502029.