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**REVIEW ARTICLE**

# A METASTATIC CARCINOMA PRESENTING AS PLEURAL EFFUSION WITH UNKNOWN PRIMARY

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**ABSTRACT**

The incidence of malignancies is on an increasing vogue and further is the increasing incidence of occult malignancies. The diagnostic implications in screening these occult malignancies pose a never ending problem to the treating clinicians. A strong suspicion in the presence of subtle clues of distant metastasis and their histopathology helps in empirical therapy of these patients thereby improving their quality of life. Here we discuss a case of metastatic carcinoma with unknown primary presenting as pleural effusion.



## INTRODUCTION

In view of increasing incidence of occult malignancies and their diagnostic implications, we would like to share our experience about a case of metastatic carcinoma of unknown primary presenting as pleural effusion. This was a 65 years old female patient who presented with shortness of breath for one month duration, with no other constitutional symptoms. Her general examination was unremarkable. She had clinical evidence of left sided massive pleural effusion and other systems including breast, thyroid and gynecological examinations were normal. Pleural fluid analysis showed exudative fluid with no other significant characteristics, ultrasound of abdomen showed a large hetrogenous mass lesion of size 8.7 x 7.0cm in the left lobe of liver with massive left sided pleural effusion. Hence CECT of thorax and abdomen were done which revealed heterogeneously enhancing irregular mass lesion is segment 4A, 5B & 5 of liver extending to the surface with irregular borders, multiple enlarged periportal lymph nodes, thickening of omentum with nodular appearance and minimal ascites, multi loculated gross left pleural effusion with nodular pleural thickening with multiple scattered right lung parenchymal nodules, ovaries appeared normal and no other mass lesion. Her upper GI & colonoscopies were normal. Her tumour markers CA125 was elevated (410u/ml), CEA, AFP and CA 19.9 were negative. Histopathology of liver lesion showed dense areas of fibro collagenous tissue infiltrated by few clusters of cells with moderate pleomorphism and nuclear hyperchromasia. Immunehistochemistry was positive for vimentin and cytokeratin 7 but negative for cytokeratin 20, synaptophysin, TTF1, Glypican. This suggests the possibility of ovary, thyroid, breast, lung malignancies, mesothelioma, cholangiocarcinoma. A subsequent PET also failed to identify a primary site. With a diagnosis of metastatic carcinoma of unknown primary she was started on cisplatin and paclitaxel, as the most common primary site in a female patient with vimentin and cytokeratin 7 positive is the breast or ovary. She responded well to the treatment and on follow up. Even with extensive diagnostic workup using modern techniques the detection rates of primary tumour site remain low. Less than 20% of patients have a primary site identified antemortem. Post mortem detection of a primary site may be higher in patients with well differentiated adenocarcinomas (Briasoulis and Pavlidis, 1997; Pavlidis *et al.,* 2003). Primary tumour sites are most often detected in the lung and pancreas followed by other gastrointestinal and gynecological malignances.

Immunohistochemical studies sometimes help in identification of tumor origin especially if metastasis is poorly differentiated by light microscopy. The development of monoclonal antibodies against various cytokeratin (CK) polypeptides have opened new avenues in the investigation of normal and cavernous epithelial cells. Among them CK 7 and CK 20 have been extensively studied in solid tumours. CK 20 is helpful in diagnosing gastrointestinal adenocarcinomas while CK7 is more common with respiratory or gynecological malignancies. Thus cytokeratins are useful in narrowing down the possibilities for unknown primary malignancies for starting an emperical chemotherapy.

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