

## CASE REPORT

# Oat Cell Carcinoma of Lung Mimicking Choriocarcinoma

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## Abstract

This is the case report of a postcesarean woman who presented with multiple lung secondaries, bilateral ovarian cysts and very high serum  $\beta$ -hCG which turned out not to be choriocarcinoma. This shows the importance of tissue diagnosis even in patients who show all other features of choriocarcinoma.

**Keywords:** Oat cell carcinoma, Serum  $\beta$ -hCG.

## INTRODUCTION

Classically, it is thought that persistent increase in serum  $\beta$ -hCG is associated with gestational trophoblastic disease especially with chest X-ray showing cannon ball lesions. This case report shows that is not the case always.

## CASE REPORT

A 32-year-old lady was referred to our hospital on 05/02/09, on the 10th postoperative day of LSCS done in local hospital with history of cough and hemoptysis from 3rd postoperative day. She was married only for one year and this was her first pregnancy. The indication for LSCS was nonprogress of labor and there was no intraoperative complications except that the left ovary was enlarged and cystic and was removed during cesarean.

CXR taken in the local hospital had revealed multiple bilateral lung cannon ball like lesions (Fig. 1). Her tumor markers were done which showed a serum  $\beta$ -hCG of 2,25,000 mIU/mL (done twice two days apart on 12th and 14th day). An ultrasound of abdomen was done which showed the right ovary to be enlarged and cystic (12 × 10 cm) and an endometrial thickness of 7 mm. The report of the ovariectomy specimen came as corpus luteal hemorrhage. Endometrial biopsy did not reveal any focus of choriocarcinoma. All the other blood investigations were within normal limits. A clinical diagnosis of gestational trophoblastic tumor with lung metastasis was made.

For want of tissue diagnosis, a CT guided FNAC of the lung secondaries was taken. To our surprise, the report came as secondaries from oat cell carcinoma bronchus (Fig. 2). She is presently undergoing chemotherapy for oat cell carcinoma. But the long- term prognosis is not very encouraging.

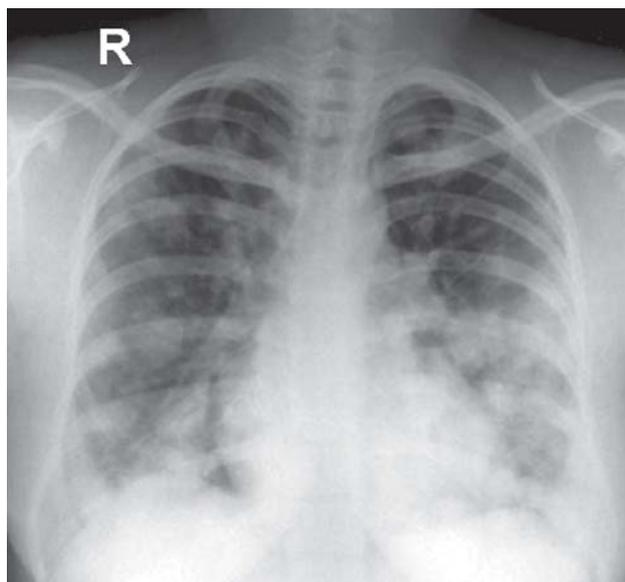


Fig. 1: CXR-P/A view showing cannon ball deposits

## DISCUSSION

Lung cancer is the second most common cancer in both males and females combined together and occurs at the rate of 68 per 100,000 persons per year. It is relatively uncommon for lung cancers to present below the age of 40 years and accounts for only 3% of all the lung cancer patients.<sup>1</sup> Histopathologically adenocarcinoma accounts for 46 to 54%, small cell cancer 16 to 28%, Squamous cell cancer (SCC) 12 to 16% and large cell undifferentiated cancer 8 to 12% in these subgroup of patients.

The association of certain pulmonary neoplasms and hormonal syndromes has been recognized and the fact that

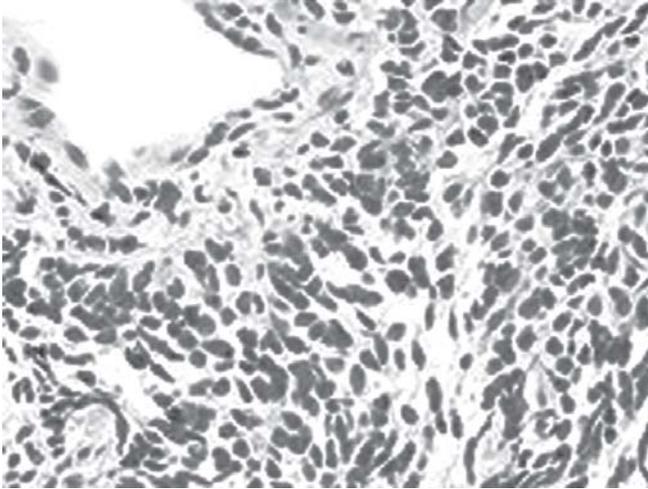


Fig. 2: Histopathology of oat cell carcinoma

such syndromes result from the release of polypeptide hormones by the tumor has been known for long.<sup>2</sup> The present condition was initially misdiagnosed as choriocarcinoma as it is very rare to see such high elevation of serum  $\beta$ -hCG (2,25,000 mIU/ml) two weeks after delivery and also because there were bilateral ovarian cysts and cannon ball deposits in the lungs.

Oat cell or small cell carcinoma of the lungs is known to secrete so many aberrant substances including  $\beta$ -hCG.  $\beta$ -hCG

is not found in normal men and levels are  $< 5$  in normal non-pregnant premenopausal females. Elevated levels of  $\beta$ -hCG  $> 100$  mIU/ml are seen in pregnancy, choriocarcinoma, germ cell tumors (gonadal and extragonadal), seminomatous and non-seminomatous testicular cancers and rarely lung and gastrointestinal cancers  $\beta$ -hCG values greater than 1,00,000 mIU/ml is classically seen in gestational trophoblastic disease. False positive results are seen in hypogonadal states and marijuana use. The low frequency and modest elevation of plasma  $\beta$ -hCG despite frequent advanced disease indicates that it has a limited value as a biological marker for diagnosis and assessment of nontrophoblastic tumor.<sup>3</sup>

## CONCLUSION

This case report shows the importance of tissue diagnosis even in patients who show all other features of choriocarcinoma.

## REFERENCES

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