Metastatic choriocarcinoma coexisting with full term viable pregnancy

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Summary: A case of choriocarcinomatous lung secondaries coexisting with a full term pregnancy is reported. Both mother and child are alive and well without evidence of the disease 3 years after delivery.

Introduction

Choriocarcinoma associated with a viable pregnancy is rare; the coexistence of a viable full term pregnancy and metastatic choriocarcinoma is even rarer.

Case report

In October 1981, a 32 year old Nigerian woman belonging to the upper social class, gravida 5, para 4-0-0-4, was admitted in the 40th week of gestation with a history of precordial pain of acute onset and difficulty in breathing. Her 4 previous deliveries had been uncomplicated and the last confinement was 4 years ago. She had attended the antenatal clinic from 24 weeks of pregnancy onwards and had enjoyed good health till her present admission to the hospital.

On examination, cardiovascular and respiratory systems were clinically normal. Blood pressure 110/80 mm Hg. Abdominal examination revealed a full term pregnancy, with no uterine contractions, the fetus presenting by the vertex, head not engaged, with good and regular fetal heart. The pelvic examination showed no abnormality.

Chest X-ray showed opaque patchy shadows in the lungs. A diagnosis of broncho-pneumonia was made and the patient was placed on parenteral penicillin and analgesics which relieved her chest pain. Two weeks later the patient went into spontaneous labour and delivered a live mature female baby weighing 7 lb 2 oz on the same day. There was retention of the placenta and a manual removal had to be done. Examination of the placenta showed that it was complete and unremarkable.

A second X-ray of the chest was taken before

Figure 1 Chest X-ray showing secondaries from choriocarcinoma

discharging her from the hospital, which showed the presence of secondaries suggestive of choriocarcinoma (Figure 1). When the patient returned for follow-up on the 8th postnatal day an immunological test for pregnancy was done which was positive at 1 in 16 dilution. The patient was referred to the Teaching Hospital, Zaria, and was treated with methotrexate and 6-mercaptopurine. She had completed 3 courses of treatment, when she started bleeding profusely per vaginum. Bleeding ceased after 2 days following which she underwent a total hysterectomy.

Chest X-ray taken in May 1982 showed clear lung fields and a pregnancy test was negative. In September 1982 human chorionic gonadotrophin concentration and a computed tomographic scan were within normal limits (done at Charing Cross Hospital, London).

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Discussion

Choriocarcinoma is encountered 1 in every 40,000 pregnancies (Cunanan *et al.*, 1980). The tumour is particularly seen following a molar pregnancy. An overall survey of all cases of choriocarcinoma shows, however, that 20–25% of cases occur after a full term or almost full term pregnancy (MacRae, 1951).

While gynaecological manifestations, usually uterine bleeding, are the most common forms of presentation, non-gynaecological manifestations of choriocarcinoma may be the presenting features in as many as a third of the patients. The most common forms of presentation are pulmonary metastases producing haemoptysis, dyspnoea, pleuritic pain or coughing, and pulmonary hypertension may be produced by growth of choriocarcinoma within the pulmonary artery (Begent & Bagshawe, 1983).

From 1907 to 1975, there have been 26 cases of choriocarcinoma coexisting with an intrauterine pregnancy (Cunanan *et al.*, 1980). Thirteen cases involved pregnancies of 35 weeks and beyond in which fetal survival could be expected. Three cases of gestational choriocarcinoma of ovary concomittant with a surviving term infant have been reported. Of the 13 cases there were only 3 instances in which both the mother and infant survived this rare but dreaded disease. This is therefore the 4th reported case of choriocarcinoma with pregnancy in which the mother and infant have both survived. The dissemination of chorionepithelioma cells to the vagina and lungs is typical of the tumour. The apparent absence of a primary lesion in some cases may well be due to the haemorrhage and necrosis which occur causing the tumour area to slough off (MacRae, 1951).

Chorionepithelioma is believed not to metastasize in the child, although a case of chorionepithelioma in the mother and the child has been reported (Daamen *et al.*, 1961). Three types of pulmonary metastases of choriocarcinoma have been described by Libshitz *et al.* (1977), but at times the appearance of the metastases pose a diagnostic difficulty.

HLA antigens are absent in the human trophoblastic cells but present in the stromal cells. Further studies have shown that hydatidiform moles (and invasive moles) originate from the father, and not the mother (Yamashita *et al.*, 1981b; Trowsdale *et al.*, 1980). Anti-HLA antibodies are demonstrated in the sera of patients with hydatidiform moles (and invasive moles) and choriocarcinoma, although choriocarcinoma cells fail to express the HLA-antigens. In the latter patients, it is possible that the anti-HLA antibodies are produced by fetal lymphocytes and placental tissue antecedent to the choriocarcinoma (Yamashita *et al.*, 1981a). Anti-HLA antibodies, in patients with trophoblastic tumours, persist as long as the urinary HCG is demonstrated. No definite relationship between the antibodies and the tumour growth or the response to chemotherapy has been established (Yamashita *et al.*, 1981a).

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