To the Editors:

Pure choriocarcinoma of ovary, probably non-gestational in origin

In September 1983, a 14 year old girl presented with episodes of vomiting following 17 weeks amenorrhoea, 9 months after her menarche. She was *virgo intacta*. Abdomino-rectal examination, showed a lump which appeared to be a 16-week sized enlarged uterus. Urinary human chorionic gonadotrophin (HCG) level was more than 700 000 iu/l. Chest xray was normal.

As liquor amnii was not obtained on aspiration of the lump an amniogram was attempted. Antero-posterior plain xray of abdomen showed an oval mass with irregular outlines, but no vesicles.

An exploratory laparotomy showed a haemorrhagic necrotic tumour, about 25 cm in diameter, arising from the region of the right ovary, which could not be identified. The tumour filled the Pouch of Douglas and was adherent to adjacent structures. The uterus was embedded anterolaterally on its left. The right fallopian tube was free of the tumour, but the right ovarian ligament could not be identified. There was no ascites or secondary deposits. The tumour was dissected out, leaving a minimal amount of tissue behind. Histological examination showed masses of necrotic haemorrhagic tissue with foci of syncitiotrophoblastic and cytotrophoblastic cell proliferation, the features of a choriocarcinoma.

Two weeks after surgery, chemotherapy was commenced with methotrexate 25 mg im on days 1,3,5 and 7 and cyclophosphamide 400 mg iv on day 9. This course of treatment was repeated after 7 days. She had a menstrual period 7 weeks after commencing treatment. She defaulted after 3 courses of treatment and presented 9 weeks later with eight weeks' amenorrhoea. Rectal examination show a right sided pelvic mass 4 cm in diameter. Urinary HCG levels were more than 3500 iu/l.

Chemotherapy was recommenced with methotrexate 50 mg im followed by cyclophosphamide 400 mg as before. Urinary HCG became undetectable after four cycles of treatment. After eight cycles of treatment a second laparotomy was done. Peritoneal washings and multiple biopsies did not show evidence of residual disease.

Chemotherapy was continued at monthly intervals for a further 18 months. Alopecia and buccal ulceration were the only side effects that occurred. Three and a half years later, laparoscopy did not show any evidence of residual disease.

Eleven years after diagnosis, the patient is alive and well, and has regular menstruation. Her pelvis is palpably normal. ESR, chest xrays and pelvic ultrasonography are normal, and urinary HCG undetectable.

The fulfillment of Spiegelberg's criteria is not possible in the diagnosis of an ovarian choriocarcinoma (1). In our patient no residual ovarian tissue was detected as the tumour had completely eroded through the capsule.

Although the diagnosis of choriocarcinoma is easy, as in this patient, the differentiation between gestational and non-gestational types is difficult (1,2,3). The clinical context may help; the non-gestational type being found in those unable to conceive or those who have had no sexual contact. Although non-gestational tumours usually have relatively lower urinary HCG levels compared to the gestational types, very high levels, as in our patient, have been reported (4,5). However it is not essential to find out the type, and treatment should not be delayed (6).

In a young girl, like our patient, conservative surgery may be employed provided the tumour is well localised (1). Non-gestational tumours, because of their poor prognosis, may need aggressive regimens of combination chemotherapy (8).

Reporting this case was delayed in order to assess the response to treatment. Since the patient is alive and well eleven years after diagnosis, she can be considered as cured.

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Malik Goonewardene, *Senior Lecturer* and **Kusuma Amaratunga**, *Senior Lecturer, Departments of Obstetrics and Gynaecology and of Pathology, Teaching Hospital, Karapitiya, Galle, Sri Lanka.*