

To the Editors:

Choriocarcinoma presenting as a renal tumour

A 29-year old woman (gravida 4, para 2) presented with right-sided abdominal pain, haematuria, loss of appetite and loss of weight. Clinical examination revealed a ballotable right kidney. An ultrasound scan revealed a tumour in the lower pole of the kidney, a right ovarian cyst measuring 6 × 3 cm and a large haematoma of the bladder, subsequently confirmed by a computerized tomography (CT) scan. There was no evidence of metastatic disease. The patient underwent right radical nephrectomy and right oophorectomy.

Macroscopic examination of the nephrectomy specimen showed a brown coloured mass measuring 16 × 10 × 8 cm. Cut surface of the mass indicated a well-circumscribed haemorrhagic tumour measuring 5 cm in diameter with smaller tumour nodules infiltrating the perinephric fat.

Histological examination confirmed a malignant tumour composed of cytotrophoblasts and multinucleate syncytiotrophoblasts displaying a bi-laminar arrangement with large areas of necrosis and haemorrhage. Despite extensive sampling no conventional renal cell carcinoma areas were found. The appearances were compatible with a choriocarcinoma in the kidney. The immunohistochemical profile was strongly positive for cytokeratin (CK), β human chorionic gonadotrophin (β -hCG) and human placental lactogen (HPL).

The right ovarian cyst was a haemorrhagic corpus luteal cyst, and serum β -hCG was 350 000 mIU/dl.

Review of this patient's history revealed that her second pregnancy was a hydatidiform mole, 4 years before the presenting illness. She had regular uneventful follow up for 2 years with urine hCG monitoring. She then conceived and had a normal term pregnancy and delivery 15 months before the presenting illness. No serum β -hCG estimation was done during this period.

Choriocarcinoma has been described as a primary tumour arising in a number of different sites besides the uterus and gonads [1]. Such tumours may represent a true primary choriocarcinoma of extra-gonadal germ cell origin [2], choriocarcinomatous differentiation of a conventional carcinoma at that site [3], or a gestational choriocarcinoma in which the index pregnancy is undetected [3], extra-gonadal germ cell tumours usually

develop in the midline recapitulating the embryological development of the gonads.

A classical biphasic growth pattern, the immunoprofile of the tumour cells and an elevated serum β -hCG help in the differentiation of a choriocarcinoma from epithelial tumors with choriocarcinomatous differentiation [4,5]. Regression of the primary tumour after it has metastasized is not uncommon and one third manifest as complications of metastatic disease, as in this case. Diagnosis is ideally based on raised concentrations of β -hCG levels in the serum and appropriate histology.

Although the majority of choriocarcinomas develop shortly after the preceeding gestation, a long latency (> 10 years) [3], between the gestation and diagnosis can occur stressing the importance as in this case of a careful obstetric history and necessity of serum β -hCG estimation in these patients.

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References

1. Alvein CG, Loehry CA. Hepatic metastases due to choriocarcinoma. *Postgraduate Medical Journal* 1998; **64**: 941–42.
2. Dilek S, Pata O, Tok E, Polat A. Extraovarian nongestational choriocarcinoma in a post menopausal woman. *International Journal of Gynaecological Cancer* 2004; **14**: 1033.
3. Mazur MT, Kurman RJ. Gestational trophoblastic disease. In: Kurman RJ, ed. *Blaustein's Pathology of the female genital tract*, v. 5. Springer-Verlag, 2002. p 1193–1247.
4. Verbeek W, Schulten HJ, Sperling M, Tiesmeier J, Stoop H et al. Rectal adenocarcinoma with choriocarcinomatous differentiation: clinical and genetic aspects. *Human Pathology* 2004; **35**: 1427–30.
5. Genest DR, Berkowitz RS, Fischer KA, Newlands CS, Fehr M. Tumours of the uterine corpus. In: Tavassoli FA, Devilee P, eds. *World Health Organization Classification of Tumours: Tumours of the breast and female genital organs*. Lyon: IARC press, 2003. p 250–4.

SAGR Ratnayake, SJ de S Hewavisenthi, Senior Lecturers, Department of Pathology and J Ariyaratne, Senior Lecturer, Department of Medicine, Faculty of Medicine, No: 8 Thalagolla Road, Ragama, Sri Lanka.

Correspondence: SJ de SH, e-mail: <projafer@ewisl.mail.net> (Competing interests: none declared). Received 7 December 2005 and revised version accepted 26 May 2006.