

*Lesson of the week***Testicular tumour presenting as gynaecomastia**

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The association of gynaecomastia and testicular tumours is well described in the literature. A testicular examination should be routine as part of the assessment of young males presenting with breast enlargement. We describe two cases where gynaecomastia preceded the appearance of testicular swelling by several months.

**Case reports****Case 1**

A 27 year old man was routinely referred to a general surgery department and assessed by a breast surgeon (RB) for bilateral gynaecomastia. On examination, the testes were normal.

Six months later he was referred to the urology department with a history of persistent terminal haematuria. The patient mentioned during the examination that he had discovered a lump in a testicle since his attendance at the breast clinic. He had paid no attention to it and had not complained about it to his general practitioner.

An abdominal examination showed an epigastric mass. An urgent ultrasound scan confirmed a testicular tumour measuring 2.4×2.0×1.6 cm and a retroperitoneal mass measuring 6.9×7.3 cm resulting from metastatic deposits in para-aortic lymph nodes. His  $\alpha$  fetoprotein was raised (639 700 IU/l (normal <7000 IU/l)), as was his total human chorionic gonadotrophin (64.0 IU/l (reference range 0.1-3 IU/l)).

The patient was admitted urgently for radical orchidectomy and endoscopic assessment. The cystoscopy showed venous congestion of the bladder neck as the likely source of haematuria. Histology testing of the orchidectomy specimen showed 80% classic seminoma and 20% mature teratoma.

The staging computed tomogram confirmed the enlargement of para-aortic and inguinal lymph nodes consistent with metastatic disease. The patient was referred to the regional oncology service for further treatment in the form of chemoradiation.

**Case 2**

A 20 year old man with unilateral breast enlargement was routinely referred to a general surgery department by his general practitioner. He was seen in a breast clinic six weeks later (by RB), where a testicular swelling was discovered on physical examination. An urgent ultrasound scan confirmed a testicular tumour. His testicular tumour markers were substantially raised ( $\alpha$  fetoprotein 3 290 000 IU/l and total human chorionic gonadotrophin 87.0 IU/l).

The patient was admitted for urgent radical orchidectomy. The staging computed tomogram showed no evidence of metastatic disease.

Histology testing of the orchidectomy specimen showed features of mixed germ cell tumour, with 50% of differentiated teratoma, 25% of embryonal carcinoma, and 25% of yolk sac tumour. The patient was referred to the regional oncology service for further management.

**Discussion**

The incidence of gynaecomastia in adult men is reported as being 35-65%, depending on the criteria for diagnosing gynaecomastia and the age group.<sup>1</sup> However, only 2% of men presenting with gynaecomastia are found to have testicular tumours.<sup>2</sup> Gynaecomastia is usually attributed to an imbalance of oestrogen and androgen but may be due, in part, to a more direct action of luteinising hormone or human chorionic gonadotrophin on the male breast.<sup>3</sup>

Most patients and doctors are not aware of the link between breast enlargement and testicular abnormality.<sup>4</sup>

We emphasise the importance of testicular examination in all men presenting with gynaecomastia, especially those who are young. Some authors advocate routine testicular ultrasonography in all men presenting with gynaecomastia even if no abnormality is found on testicular examination.<sup>5</sup> We agree with this and advocate that  $\alpha$  fetoprotein and human chorionic gonadotrophin concentrations are also measured.

Our case reports highlight the need for repeated testicular self examination by men with breast enlargement. They should be advised to report any abnormality immediately to their general practitioner or specialist.

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**Corrections and clarifications**

*No clear evidence for countries that have enforced the wearing of helmets*

In this Analysis and Comment article by D L Robinson, the author's address was given as the University of New England, Armidale, NSW, Australia (*BMJ* 2006;332:722-5, 25 Mar). She has changed jobs since writing the article and now works at another unit at the university (JSF Barker Building, University of New England, Armidale, NSW 2351). She asks that all communication be sent to her via her email address (drobinso@aanet.com.au).

**Men with breast enlargement should do repeated testicular self examination and report any abnormality immediately**

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