Alcoholic hepatitis with ascites may mimic advanced ovarian malignancy

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INTRODUCTION

Cancer antigen-125 (CA125) is a glycoprotein tumour marker that may be helpful in screening, diagnosis and monitoring of ovarian carcinoma (Kehoe and Selman, 2001). However, elevated CA125 levels are not specific for this condition. In the case described here elevated CA125 levels lead to a missed diagnosis of alcoholic liver disease complicated by ascites.

CASE REPORT

A 30-year-old woman presented to her GP with 2 weeks of backache, abdominal swelling and oedema. Urgent ultrasonography revealed extensive ascites, but the pelvis was poorly visualized. The patient was urgently admitted to a gynaecology ward for investigation.

On admission the presence of ascites was confirmed. She had a small number of spider naevi, but no other stigmata of chronic liver disease. She admitted drinking five units (50 g) of alcohol daily and had no other risk factors for liver disease. Her only obstetric history was of a single normal pregnancy.

Initial blood liver function tests were normal except for raised alkaline phosphatase (ALP) (397 U/litre; normal <250 U/litre) and gamma glutamyl transferase (γ-GT) (108 U/litre; normal <35 U/litre) levels and reduced albumin levels (21 g/litre). Her cancer antigen-125 (CA125) level was elevated (344 kU/litre; normal <5 kU/litre). Coagulation studies were normal.

The ascites was drained under ultrasound guidance and a drain left in situ which drained 1–5 litres daily. This second ultrasound scan suggested a 35 mm cyst in the left adnexal region and an enlarged 'bright' liver consistent with fatty infiltration. Ascitic fluid cytology revealed no malignant cells. Computed tomography scanning confirmed an ovarian cyst and thickening of both fallopian tubes.

Eleven days after admission a laparotomy was performed for presumed ovarian cancer. Preoperatively the serum albumin level was further reduced (18 g/litre), but liver function was otherwise stable (ALP 340 U/litre, γ-GT 102U/litre). Coagulation tests were normal. At surgery ovarian cysts and abnormal fallopian tubes were confirmed and a hysterectomy and salpingo-oophorectomy performed.

This patient's postoperative course was complicated by persistent high volume drain losses. Four days postoperatively she became hypotensive, hypoglycaemic and oliguric. She was treated with fluid challenges and referred for dietary supplements. Eight days postoperatively these problems persisted and she developed grade 2 hepatic encephalopathy. Her prothrombin time had now risen to 116 seconds and her liver function tests worsened (bilirubin 69 mmol/litre, albumin 22 g/litre, ALP 248 U/litre and aspartamine transaminase 1203 U/litre; normal <25 U/litre). On further questioning the patient's relatives now admitted a long history of excessive alcohol intake (greater than 20 units daily) and furthermore to bringing alcohol into hospital (five bottles of Hooch (an 'alcopop') preoperatively and a bottle of vodka postoperatively).

She was transferred to a liver unit but rapidly deteriorated, developing multiorgan failure and dying within 36 hours.

Operative histology revealed benign follicular ovarian change and chronic salpingitis. There was no evidence of malignancy. An early post-mortem liver biopsy found established cirrhosis with severe steatosis.

DISCUSSION

The CA125 antigen is expressed on a large molecular mass glycoprotein that is produced by many tissues derived from the coelomic epithelium (e.g. pleura, peritoneum, and endometrium) (Bagshawe and Rustin, 1995). Normal ovarian tissue does not produce CA125 but it is expressed by approximately 80% of ovarian epithelial tumours (Kabawat et al, 1983). The utility of CA125 for cancer screening is unclear and is currently being addressed in a large study (UK Collaborative Trial of Ovarian Screening; UKTOCS).

CA125 may be elevated in many conditions affecting the peritoneum, including endometriosis, salpingitis, ectopic pregnancy, fibroids and 40% of non-ovarian abdominal neoplasms (Meden and Fattahi-Meibodi, 1998). It is also elevated in any disorder associated with ascites (e.g. Meig's syndrome (Spinelli et al, 1999), tuberculosis (Ibrahim et al, 1999), and chronic liver disease of any aetiology). CA125 is therefore of no diagnostic value when assessing a patient with ascites. Cirrhosis in the absence of ascites is rarely associated with elevations of CA125 (7% cirrhosis without ascites *vs* 98% with ascites) (Zuckerman et al, 1999).

The diagnosis of alcoholic liver disease was initially missed in this patient as a result of a number of factors including concealment of alcohol intake and normal bilirubin and transaminase levels. This patient initially had a small number of spider naevi but no other stigmata of liver disease.

This patient's poor outcome can be attributed to several factors. Major surgery has a poor outcome in patients with cirrhosis (overall 31% mortality), particularly if associated with alcoholic hepatitis (up to 100% mortality), ascites, or failure to recognize liver disease preoperatively (Powell-Jackson et al, 1982). In this case the poor prognosis was probably exacerbated by the continued postoperative

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alcohol intake. The persistent high volume abdominal drain losses caused by splanchnic haemodynamic abnormalities, together with impaired hepatic albumin production led to severe hypoalbuminaemia with its associated complications. Finally, alcoholic liver disease leads to impairment of the reticuloendothelial system, increasing the risk of infection particularly via the ascitic catheter.

CONCLUSION

This paper demonstrates that raised CA125 levels may mislead the clinician into diagnosing ovarian malignancy. CA125 is not useful in the differential diagnosis of ascites. Surgery in patients with unsuspected liver disease has a very high mortality. HM

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IN THE PUBLIC'S VIEW...

Tax and the metatarsal

When *In the Public's View...* started some years ago, there was always plenty of medical material in the public's view, but it was easy to focus on one newspaper story or one television or radio programme that was the obvious subject for the column. Not any more.

Even before Derek Wanless's report, in which he strongly supported funding the NHS from general taxation, and Gordon Brown's budget, which duly delivered, it's been more a question of digging out the stories that didn't have a medical interest.

Much though I applaud both Wanless and Brown, and grateful that I am for the serious money, I remain profoundly worried. Many commentators, including Polly Toynbee in the *Guardian*, take care to list the many improvements that have occurred in the last few years, despite these having been swamped by the bad news stories.

But still the government's activity is too frenetic and unfocussed. We've only just got used to the Commission for Health Improvement (CHI), and now it's going to be subsumed into another agency announced with the budget whose abbreviation or acronym I've not even bothered to remember.

This latest creation came too late for the King's Fund report, which criticized the government for its:

'torrent of new policies…to iron out health inequalities, raise care standards, improve NHS productivity…and extend services'.

Managers, health-care workers and independent reviewers mostly think that targets and over-burdensome accountability distort the service, yet politicians are unbending in demanding them. Except for Stephen Byers, large corporations, and super-rich foreigners who live here and don't pay tax.

I think Wanless and Brown are right (although I would have preferred the increases to come from income tax rather than National Insurance), I just wish they'd spoken out 4 or 5 years ago. Just imagine what improvements the health service might have seen by now if, instead of the rhetoric of clinical governance, we'd had the solid billions provided by increased taxation.

It may now be too late. The Conservatives and shadow Health Secretary Liam Fox want the NHS to fail, so they can convince the public of the benefits of their preferred methods of funding health care. They look at France and Germany, which use social insurance, but ignore the better infrastructure of those countries. Social insurance will not be more efficient than tax moneys at rebuilding the infrastructure of our health service.

At the next general election, Labour could be voted out because taxation is deemed to have failed to improve the NHS. If so, Labour will have only themselves to blame for choosing to start 4 years later than they should have and, in doing so, to have condemned us to the Tories finally dismantling Bevan's dream.

But all this pales into insignificance compared with the most important medical story of the year so far. Never mind the hip bone, the shin bone and the ankle bone, 2002 is the year of the metatarsal. First David Beckham broke his second, and then Gary Neville broke his fifth. Presumably, come the summer and the start of the cricket season, it will be time for the metacarpus to come into its own. HM

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