Increasing abdominal girth:

The importance of clinical examination

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ABSTRACT

Clinical examination and an open mind are two of the most powerful tools at a doctor's disposal. We report the surgical removal of a 17.5kg ovarian tumour in a patient with a raised body mass index who had been complaining of increasing abdominal girth for some time. It is clear from the literature that often the diagnosis of such lesions is delayed. With early clinical examination and consideration of the differential diagnosis of increasing abdominal girth, lesions such as this could be detected earlier. This would make the surgical treatment easier, would potentially reduce the spread of a tumour if it is found to be malignant, and would prevent the impaired function of a patient who carries such a lesion.

Keywords

Abdominal girth increase, clinical examination, ovarian cancer.

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Case report

The patient is a 50-year-old postmenopausal woman. She has had a raised body mass index for most of her life. She first presented to her practice nurse in June 2003 as a new patient wanting help to lose weight. She had tried many weight loss programmes and Xenical. She had been given education on nutrition and physical activity. She was also hypertensive, controlled with three antihypertensive agents, and saw her general practitioner periodically for monitoring of her blood pressure.

During one of these occasions in July 2005 she mentioned her intermittent constipation. On examination her abdomen was documented as being soft, with bowel sounds present and hard faeces palpable per rectum. She was given laxatives and dietary

NZFP *does not usually publish Case Reports. The reason for this is that, generally, there is not a lot to learn from them. They are often about unusual conditions that most other GPs are unlikely to ever experience or they summarise (in retrospect) how clever the authors were to make such an amazing diagnosis, leaving out the complexities and serendipities that were involved before finally reaching their conclusion. Case reports are generally regarded, at best, as weak evidence of clinical effectiveness.*

However, there are obviously exceptions to this and in this issue we publish two Case Reports that have relevance to the theme of 'Practical Solutions'. The first reminds us about the importance of not jumping to conclusions and the second is about trying out a new product for an old problem.

I believe that these are interesting and informative reports and thank the authors for sharing these with us. – Editor NZFP

advice. In February 2006 she again presented with constipation, and her abdomen was documented as being very distended. She was given advice on fibre. Two weeks later she returned, mentioning that her abdominal girth had been steadily increasing over six months' duration. The general practitioner carried out a clinical examination of the abdomen. He documented that her abdomen was distended and queried ascites. He requested an urgent ultrasound scan. The scan demonstrated a large cystic mass filling the abdomen and pelvis.

The patient was referred to gynaecology at Whangarei Hospital. We requested a CT scan, which confirmed the mass. No free fluid was found in the abdomen and no enlarged lymph nodes or distant spread were noted. A tumor marker, CA 125, was mildly raised (48U/mL).

On admission for surgery the patient remarked that her abdominal girth had been increasing while the girth of her limbs was actually decreasing. She told us that in retrospect her abdominal girth had been increasing for closer to three years. The patient underwent a laparotomy by midline incision from just above the symphysis pubis to 10cm above the umbilicus. The mass was mainly cystic, but had some solid components. The external surface was smooth without excrescences. There were multiple adhesions between the mass and the anterior abdominal wall, the posterior aspect of the uterus and broad ligament and the omentum. There was no free fluid. The mass appeared to originate from the right adnexal area. It was removed whole, and found to weigh 17.5kg. It measured 450mm in diameter. The left adnexa, which had a 6cm cystic structure adherent to the posterior aspect of the uterus and broad ligament, was also removed. A subtotal hysterectomy and omental biopsy were carried out. The remainder of the abdominal organs appeared normal.

The patient's postoperative course was uneventful, except for a minor wound infection. She was discharged on the eighth postoperative day. At that time she no longer required medication for hypertension.

The patient's history, imaging and the histology of the mass were reviewed by the Regional Centre for Gynaecologic Oncology. They stated the lesion was a mucinous carcinoma of the right ovary with expansile invasion. The peritoneal washings and omental biopsy were negative for tumour. The stage of the ovarian malignancy was therefore IA (confined to one ovary). The Regional Centre for Gynaecologic Oncology recommended no further therapy.

The patient was seen in the gynaecology clinic for her six weeks' post-operative visit. She was well and had recovered normal urinary and bowel function. Her weight was 93kg as compared to her preoperative weight of 113kg. The large abdominal incision had healed well except for a small separation below the umbilicus, which was closing progressively with wound care by the district nurse.

The patient will be followed up and have serial CA 125 measurements done, due to the risk of recurrence. She will be seen every six months for two years and then annually thereafter in the gynaecology clinic.

Many of the large masses reported in the literature had significant delays in detection and management because they were masked by pre-existing obesity

Discussion

This case emphasises the need to bear in mind, early on, the various causes for increasing abdominal girth, other than obesity. When faced with such a case, we are reminded of the mnemonic of the Fs : 'Fat, Fluid, Faeces, Fetus, Flatus, Fibroids, Full bladder'. We have been unable to determine the origins of this mnemonic that is often taught to medical students learning clinical examination of the abdomen. It is very useful to keep in mind. It reminds us that the differential diagnosis of increasing abdominal girth should include obesity, ascites, constipation, pregnancy, gaseous bowel distension (obstruction), gynaecological or other masses (fibroids, ovarian cysts/carcinoma, other neoplasia), and urinary retention.

While large, the ovarian mass of our patient is by no means record-breaking. A review by Beacham et al. in 1971 listed 16 ovarian masses of over 251b (11.3kg) in the preced-

Figure 1

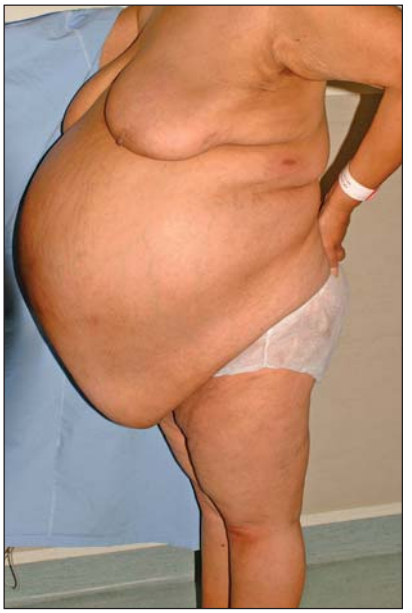
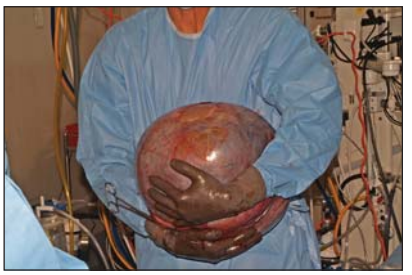


Figure 2



ing 25 years.[1] They included 11 cystadenomas, two cystadenocarcinomas, one thecoma and another listed simply as 'multilocular'. The largest of these, a mucinous papillary cystadenoma, weighed 89.8kg. A leiomyoma[2] or dermoid cyst could also present as a large mass. The largest ovarian mass we have found on record was estimated to weigh 113 kg.[4] This mass was a mucinous cystadenoma. Its weight was calculated by weighing the patient before and after removal of the mass, as it would not have been possible to remove the mass intact. Over five days 48.4L of fluid was drained percutaneously and the remaining 72kg mass was excised during a six hour operation.

Clinical examination and an open mind are two of the most powerful tools at a doctor's disposal

Many of the large masses reported in the literature had significant delays in detection and management because they were masked by pre-existing obesity.[5-7] As in our case the treatment of ovarian masses has sometimes been delayed for this reason, while in our recent experience at least one other case of a large ovarian cyst was mistaken for a 3rd trimester pregnancy.

Conclusion

This case reminds us of the need for early and possibly repetitive clinical examination when seeing patients with increasing abdominal girth. One should not fall into the trap of ascribing this increase in girth to overindulgence in food resulting in increasing obesity and one should bear in mind the mnemonic of the Fs. The fact that this patient also reported a decrease of the girth of her limbs in the presence of increasing abdominal girth could have been an additional sign that something more sinister was developing. As ever, the importance of clinical examination cannot be underestimated.

Acknowledgements

This article is produced with the consent of the patient and her general practitioner.

We thank Di Vickers for the photographs, and Margaret Hart for help with Medline searches.

Competing interests

None declared.

References

1. Beacham WD, Webster HD, Lawson EH, Roth LM. Uterine and/or ovarian tumours weighing 251b or more: a review of the literature since 1946. Am J Obstet Gynecol. 1971; 109(8): 1153-61.
2. Khaffaf N, Khaffaf H, Wuketich S. Giant ovarian leiomyoma as a rare cause of acute abdomen and hydronephrosis. Obstet Gynecol. 1996; 87(5 pt 2): 872-3.
3. Monk BE, Isaacs AJ, Bayliss R. Giant ovarian dermoid masked by obesity. Postgrad Med J. 1980; 56(660): 748-9.
4. Morrison P, Morgan G. Removal of a giant ovarian cyst. Anaesthetic and intensive care management. Anaesthesia. 1987; 42(9): 965-74.
5. Poole SY, Malone JM Jr, Jacques SM, James A. Giant mucinous ovarian tumor with low malignant potential with foci of well-differentiated mucinous adenocarcinoma masked by massive obesity. A case report. J Reprod Med. 1994; 39(12): 982-4.
6. Ottesen M, Rose M. Giant ovarian tumor masked by obesity. Acta Obstet Gynecol Scand. 1994; 73(4): 349-51.
7. Jones DR, Vasilakis A, Pillai L. Timberlake GA. Giant, benign, mucinous cystadenoma of the ovary: case study and literature review. Am Surg. 1992; 58(7): 400-3.

Insomnia in the older adult

'As people age, the sleep/wake circadian rhythm becomes less synchronized, no longer producing the same response to external cues, and is much weaker and less robust, resulting in less consistent sleep/wake periods across the 24-hour day. The sleep/wake cycle in the older adult also shifts, or advances, comprising a condition called advanced sleep-phase (ASP). Older adults with ASP become sleepy in the early evening (perhaps 7:00 pm or 8:00 pm) and wake up in the early morning hours (3:00-5:00 am). This results in complaints of waking in the middle of the night and being unable to return to sleep.

One problem that older adults with ASP encounter is not spending enough time in bed. Although tiring early, the older adult tries to stay up later in the evening but still wakes up early in the morning, which results in not getting sufficient sleep due to a short time in bed. In a second scenario, the older adult falls asleep in front of the television in the early evening, and then, once in bed, has difficulty falling asleep and staying asleep.

The decision about whether to treat ASP depends on the extent of the discomfort that the older adult is experiencing. For those wanting a sleep schedule more consistent with those of others in the household or social circle, treatment can be initiated.

One treatment for ASP is increased exposure to bright light. Bright light is the external zeitgeber that most influences the sleep/wake circadian rhythm; however, older adults are exposed to very little bright light. Increasing the bright light exposure later in the day will delay sleep/wake circadian rhythm, resulting in the older adult becoming sleepier later in the day and sleeping later into the morning hours.'

Ancoli-Israel S. Medscape Primary Care http://www.medscape.com/viewarticle/528725_1 Posted 21 April 2006