



Fimbrial dermoid cyst with elevated CA19-9 levels: A case report

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ABSTRACT

We report the case of a 39-year-old woman who presented in an acute setting with pelvic pain, an adnexal mass on imaging and a high CA19-9 level. She was taken for surgery, where a large dermoid cyst was found at the fimbrial end of a fallopian tube at the time of laparoscopy, with no apparent connection to either ovary and absence of ovarian necrosis. This was corroborated on final histology. Dermoid cysts in aberrant locations are usually reported at Caesarean section or during laparoscopic sterilisation and thus, understandably, a pre-operative CA19-9 level is rarely available. That and the rarity of these 'ectopic dermoids' make it hard to give further support for a causative association with the high tumour marker levels. Some authors suggest that auto-amputation of a dermoid cyst or part thereof and subsequent reimplantation may give rise to this phenomenon, and thus the term 'wandering dermoid' has been applied to similar situations. This is what we postulated as the cause in our case. It is likely that a full understanding of the aetiology of wandering dermoid cysts will remain elusive, given the paucity of cases.

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1. Introduction

In 2013 Ulkumen et al. [1] reported an abnormally elevated CA19-9 level in association with a large dermoid cyst and ovarian torsion in a 14-year-old virgin girl. They postulated that the elevated tumour marker was also a marker of torsion and subsequent necrosis.

We report a similar finding in a 39-year-old woman: high CA19-9 levels were associated with a large dermoid cyst located at the fimbrial end of the left fallopian tube, with no apparent connection to either ovary and no ovarian necrosis.

2. Case presentation

The patient was admitted with abdomino-pelvic pain and a large cyst [9 cm] was found on ultrasound and CT scans. Her CA19-9 level was elevated at 1665 IU/ml [normal levels 0–37 IU/ml] but she had normal CA125 and CEA levels. After discussion at the gynaecology oncology multidisciplinary team meeting, a recommendation was made for a laparoscopic oophorectomy, it being assumed that the cyst was ovarian in origin. At pre-operative counselling, the benefits of a laparoscopic approach and the risks of rupturing the cyst, including upstaging in the event of sinister final histology, were explained to the patient, who elected to undergo laparoscopy.

At laparoscopy, findings were of a normal uterus and ovaries, the right being slightly enlarged and cystic. There was no evidence of active infection or endometriosis or evidence of any malignant or metastatic disease. There was a central adhesion that needed dividing to allow a good view of pelvic structures. On the fimbrial end of the left fallopian tube, there was a well-defined, large, smooth-walled cyst approximately 8–9 cm in diameter. On puncturing the same, yellow fluid and some hair were seen. The cyst was removed along with the left tube. Histopathology confirmed a diagnosis of dermoid cyst.

3. Discussion

In our case as well as the one cited in the introduction [1], the CA19-9 levels were markedly elevated, normal levels being <37 IU/ml. Some elevation is seen in CA19-9 levels with ovarian dermoid cysts though not as high, as enumerated in a series of 215 women, where the mean reported level was found to be 83.5 +/- 179.2 IU/ml [2] (which is a notably wide range). CA 19-9 is a tumour marker that is often elevated in people with gastrointestinal tumours, especially pancreatic. High levels might be associated with dermoids that have undergone torsion [3] or rupture. However, there is a paucity of data in the literature to suggest that this could be used as a diagnostic test or for triaging in dermoid cysts, as our case would suggest; very high tumour marker levels do not necessarily correlate with a benign histology.

Dermoid cysts in aberrant locations are commonly reported at Caesarean section or laparoscopic sterilisation and thus, under-

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standably, a pre-operative CA199 level is rarely available. That and the rarity of these 'ectopic dermoids' make it very hard to give further support to a causative association.

Abnormal arrest of germ cells, making their way down the dorsal mesentery to the genital ridge in embryonic life, might explain dermoid cysts arising at those sites [4] but not those occurring at sites as diverse as the pouch of Douglas or, in our case, on the end of an oviduct.

On occasion, dermoid cysts have been found in association with the absence of other structures, notably one ovary, as expanded on in a case report by Dubey et al [5]. This was not the finding in our case.

Some authors suggest that an auto-amputation of a dermoid cyst or part thereof and reimplantation may give rise to this phenomenon and the term 'wandering dermoid' has been applied to similar situations [6]. This is what we postulated as the cause in our case. It is likely that a full understanding of the aetiology of wandering dermoid cysts will remain elusive, given the rarity of cases.

Contributors

All authors contributed equally to the preparation of this case report and saw and approved the final manuscript.

Declaration of Competing Interest

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Obtained.

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