

Fig 2. ECG monitor tracing shows a characteristic short (A), long (B), short (C) sequence of ventricular activity initiating polymorphic ventricular tachycardia also known as “torsades de pointes” for its twisting QRS axis about the iso-electric line.

implanted due to continued risk of arrhythmia from electrolyte loss from the ileostomy. The QTc came down to 454ms and BNP fell to 179pg/ml at discharge.

QT prolongation is the surface ECG manifestation of abnormal repolarisation of myocardial cells due to problems with cellular ion channels. The disorder is classified as either congenital or acquired. Acquired QT prolongation may be due to:

1. Electrolyte depletion, particularly potassium or magnesium,
2. Drugs that affect myocardial ion channels
3. A feature of tako-tsubo cardiomyopathy, a catecholamine induced metabolic disorder of myocardial cells caused by physical or emotional stress, especially seen in older females^{1,2}.

A reference list of drugs causing QT prolongation is available from the University of Arizona (<http://www.azcert.org>) or the British National Formulary.

Initial presentation and ECGs in tako-tsubo cardiomyopathy are similar to an anterior ST or non-ST segment myocardial infarction but often with QT prolongation. A small troponin rise may be seen but coronary arteries are normal with a characteristic “apical ballooning” or Japanese octopus pot (“tako-tsubo”) pattern seen on ventriculography. Beta-blockade is a key element of treatment. The ventricular changes are mostly reversible if the patient survives the acute phase³.

Our patient had all three causes of an acquired QT prolongation - excessive secretion from her ileostomy producing hypomagnesaemia, daily ondansetron and fluoxetine therapy, and acute tako-tsubo cardiomyopathy. We believe the development of tako-tsubo cardiomyopathy exacerbated our patient’s pre-existing QT prolongation to a degree where potentially fatal arrhythmias occurred.

A case of congenital long QT syndrome and tako-tsubo cardiomyopathy with torsades de pointes has been described⁴ but MEDLINE and PubMed searching (keywords: long QT

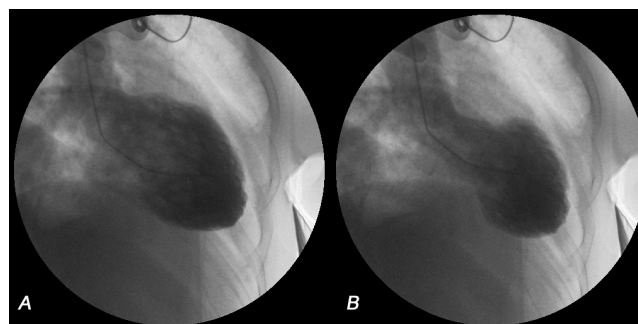


Fig 3. Left ventriculography during diastole (A) and systole (B) demonstrate typical left ventricular apical ballooning and hypercontractile base of tako-tsubo cardiomyopathy.

and cardiomyopathy) revealed no acquired cases. Tako-tsubo cardiomyopathy induced by physical or emotional stress may exacerbate an underlying long QT syndrome with risk of sudden cardiac death.

The authors have no conflict of interest

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PSEUDOMYXOMA PERITONEI PRESENTING AS INGUINAL HERNIA.

Editor,

Pseudomyxoma peritonei (PMP) is an uncommon disease with varied presentations. We present two cases presenting at inguinal hernia repair.

Case 1: A 41 year-old man presented for right inguinal hernia repair. An encysted swelling was discovered at surgery. Histopathology of the sac showed chronic inflammatory tissue containing lakes of mucin but no neoplastic epithelial cells. Postoperative CT scan showed thickening around the caecum with a fluid collection and abnormality related to the appendix. Colonoscopy and biopsies were normal. The patient was referred to the National Specialist Commissioning Advisory Group Pseudomyxoma Peritonei Centre (Basingstoke) where a laparotomy revealed a

perforated appendiceal tumour and widespread peritoneal disease. A radical greater omentectomy, right hemicolectomy, cholecystectomy and removal of peritoneal disease was performed. Intraperitoneal chemotherapy was administered and the patient made a satisfactory recovery.

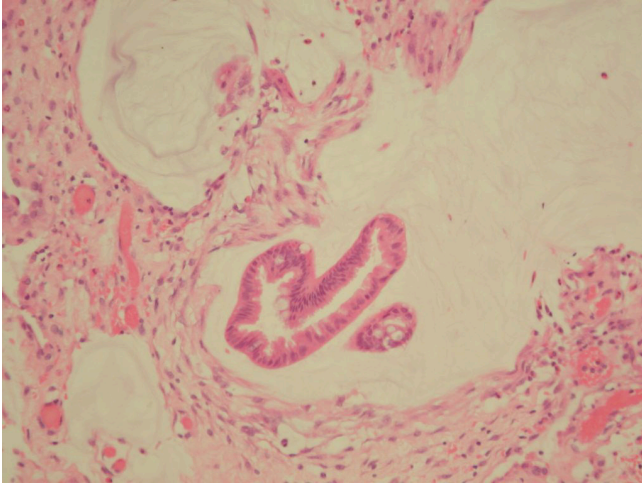


Fig 1. H&E stain (x200)

Case 2: A 73 year-old man presented for right inguinal hernia repair. At surgery the hernial sac appeared thickened. Histopathology (fig 1) showed a thick inner wall composed of chronic inflammatory tissue containing lakes of mucin and well-differentiated enteric type glandular epithelium with minimal cytonuclear atypia. This was considered diagnostic of PMP. Immunohistochemistry showed cytokeratin 7-/20+ staining, characteristic of pseudomyxoma peritonei of large bowel, especially appendiceal origin (fig 2). Post-operative CT scan showed omental cake and ascites. The appendix appeared normal. CEA was raised at 45ng/ml; Ca19-9 was normal. Due to the extent of disease the patient was managed conservatively with follow up imaging and monitoring of tumour markers.

Discussion: PMP is characterised by the build up of mucoid material and fluid within the abdomen and pelvis. The diagnosis is challenging due to the range of presenting features. Patients typically present with abdominal pain, increased abdominal girth or an abdominal mass. A recent review of the clinical presentation of PMP found new onset hernia to be the fourth commonest presentation (14% of cases)¹.

It is well established that the majority of cases are of appendiceal origin². The ovary is rarely the origin of PMP except for the rare case of an intestinal type mucinous neoplasm arising in a teratoma³. The ovary may however be a site of secondary spread from the appendix. There are two variants of PMP; Disseminated peritoneal adenomucinosis (DPAM) and peritoneal mucinous carcinomatosis (PMCA). DPAM arises from an appendiceal mucinous adenoma and peritoneal mucinous carcinomatosis (PMCA) is associated with mucinous gastrointestinal adenocarcinomas⁴. The CK7-/CK20+ immunohistochemical staining pattern is characteristic of pseudomyxoma peritonei of gastrointestinal, especially appendiceal origin (Case 2). Primary ovarian mucinous tumours are characteristically CK7+/CK20-³.

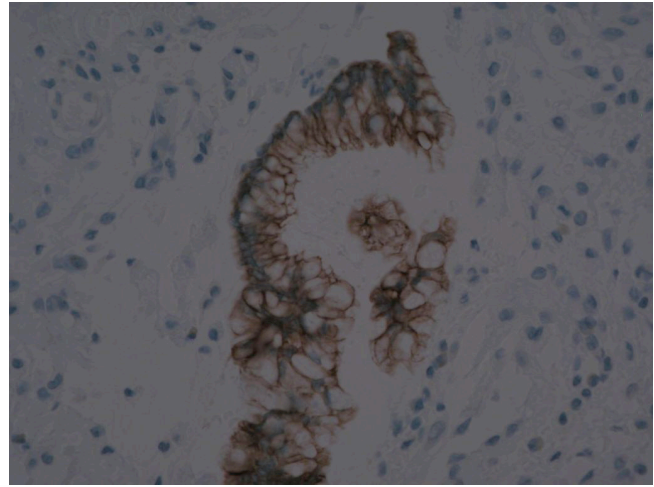


Fig 2. Cytokeratin 20 (x400)

If mucoid material or fluid is found at the time of hernia repair it should be sent to histopathology and the hernia repaired without mesh, thus avoiding trapping tumour cells. Tumour markers should be sent, a CT scan arranged, and the patient referred to a specialist treatment centre once the diagnosis is confirmed⁵. Treatment consists of a combination of peritonectomy procedures and intraperitoneal chemotherapy. This approach has reported 5-year survival rates in excess of 80%⁵.

Conclusion: These cases emphasise the importance of considering PMP if a thickened sac or mucinous material is encountered at hernia repair.

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