



## “Doctor, my stomach hurts!”

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Joanna, 32, visits the clinic because of recurrent epigastric pain. The pain fluctuates in severity and frequency. This problem has been developing intermittently over last two to three months and is getting worse with food intake (e.g., coffee, alcohol, or fatty meals). Joanna had a similar problem five to 10 years ago that lasted for a few weeks and then disappeared without any treatment. Since that time, the pain has been periodic. Joanna's appetite is good and she has not experienced any vomiting or weight loss.

### Medical history

Joanna's medical history reveals the following:

- she is a non-smoker,
- she has no known drug allergies,
- she had a blunt upper abdomen injury at the age of 12 and developed recurrent pain thereafter over this area,
- she had an appendectomy at nine-years-of-age,
- she is married, has one healthy child and
- her family history is unremarkable.

### Physical examination

Joanna's physical exam had only one significant finding: epigastric tenderness.

### Clinical investigations

Clinical investigations show:

- Chest x-ray is normal
- EKG is normal

- Complete blood count and blood chemistry are normal
- Gastroscopy showed evidence of acute and chronic gastritis
- Abdominal ultrasound (pancreatic) showed that there is a 2.5 cm hypoechoic mass in the body of the pancreas. Focal cystic areas are present within this mass. The mass is well demarcated and forces the contours of the pancreas to bulge (Figure 1)
- CT scan of the abdomen reveals the presence of a 2.5 cm, septated low-density mass within the body of the pancreas (Figure 2)



Figure 1. Abdominal ultrasound.

### What's your diagnosis?

- a) Pancreatic pseudocyst or pancreatic fluid collection at the head of the pancreas
- b) Primary pancreatic tumour of the head of the pancreas
- c) Microcystic adenoma of the head of the pancreas
- d) Pancreatic abscess of the head of the pancreas



Figure 2. CT scan of the abdomen.

**Answer: C**  
*Microcystic adenoma of the head of the pancreas*

A fine needle aspiration of the pancreatic mass was performed (Figure 3), which has the appearances of a microcystic adenoma. A follow-up infused CT scan of the abdomen at six months time showed no change in the multiseptated cystic lesion in the head of the pancreas.



Figure 3. Fine needle aspiration of the pancreatic mass.

### *About microcystic adenoma*

Microcystic pancreatic adenoma is an extremely rare tumour, arising in exocrine pancreatic tissue, which may lead to severe abdominal pain.

Microcystic adenoma is a benign pancreatic neoplasm typically seen in elderly women. Presenting symptoms and signs include:

- pain,
- weight loss,
- jaundice and
- presence of palpable masses (but the lesion may be incidental and does not necessarily require excision).

Patients with malignant changes may have a history of weight loss and jaundice. A variety of abnormalities have been reported in association with mucinous pancreatic cystic tumours. These include:

- hypertension,
- diabetes mellitus,
- peptic ulcers and
- biliary disease.

The incidence of other neoplasms and deep venous thrombosis is also increased.

The tumour is generally large and well demarcated. It contains innumerable small cysts, giving it a honeycombed appearance.

### *Presentation on CT scan*

On CT scans, the hypervascular tumour has attenuation values close to those of water before contrast material is administered, but it usually enhances afterward.

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### **Presentation on sonogram**

On sonograms, tumours are often predominantly echogenic, although some larger cysts may be seen. A calcified central scar may be seen with either modality. Serous cystadenoma of the pancreas is a rare lesion thought to be almost invariably benign.

Despite advances in imaging, the diagnosis of pancreatic masses remains difficult.

### **Differential diagnosis**

The differential diagnosis of a cystic pancreatic mass is large. Accurate diagnosis is imperative for appropriate patient management; therefore, occasionally obtaining tissue for histologic diagnosis may be essential.


Pancreatic biopsy is usually performed with fine needles used for cytology. The use of larger needles for core biopsy slightly improves

sensitivity, especially in masses due to chronic pancreatitis or neuroendocrine tumours.

Complications seldom occur; among them, acute pancreatitis and tumoural seeding are the most important. Percutaneous pancreatic biopsy is a safe, flexible and reliable method for diagnosing pancreatic masses.

### **Treatment**

Although microcystic adenoma of the pancreas is well recognized as a benign tumour, it is often treated surgically.

Surgical resection is the treatment of choice for symptomatic tumours and tumours that show continuous growth. 

#### Resource

1. Khan A, Sheen A, Macdonald S, et al: eMedicine-Pancreas, mucinous cystic neoplasm. Updated November 7, 2006. <http://www.emedicine.com/radio/topic518.htm>.

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