Evaluation and Management of Cystic Lesions of the Pancreas

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No Disclosures
Pancreatic cysts

- Found in 1.2% to 13% of patients undergoing CT or MRI\(^1\)
- Asymptomatic in most patients
- Can be neoplastic or non-neoplastic
- Some neoplastic cyst have malignant potential

Cystic pancreatic lesions

Goals:

- Classify cystic pancreatic lesions
- Differentiate neoplastic from non-neoplastic cysts
- Identify neoplastic cysts with malignant potential
- Overview of treatment of cystic lesions of the pancreas
Classification of Pancreatic Cysts
Non-neoplastic cysts
- Pseudocyst
- True cyst
- Lymphoepithelial cyst

Neoplastic cysts
- Serous cystadenoma
- Mucinous cystic neoplasm
- IPMN
- Solid pseudopapillary tumor
- Other
Evaluation of Pancreatic Cysts
History and Physical

- Symptoms
- Medical history
- Family history
Imaging Studies

- CT scan
- MRI
- Endoscopic ultrasound
- ERCP
Pseudocyst

- Usually single cyst
- Thick wall
- Lack of wall calcifications
- Peripancreatic inflammation
- Can have associated pancreatic necrosis
Serous Cystadenoma

- Well circumscribed
- Multiloculated:
  - Microcystic
  - Macrocystic
- Located throughout the gland
- Can be very large
Mucinous Cystic Neoplasms

- Occurs exclusively in females
- Large cysts with septations
- Can have a solid component
- Predominantly occur in body and tail of pancreas
- Do not communicate with main pancreatic duct
IPMN

- Most common cystic neoplasm
- Can occur in the main duct or side branches
- Are more commonly located in the head and uncinate
- Communicate with main pancreatic duct
Endoscopic ultrasound

- Better definition of cyst structure
- Allows sampling of the cyst for cytology and fluid analysis
- Allows therapeutic interventions
- Operator dependent
Other diagnostic tests

- Fluid analysis:
  - Amylase level
  - CEA level

- Cytology

- K-ras mutation
## Pancreatic cystic lesions

<table>
<thead>
<tr>
<th>Diagnostic features</th>
<th>Pseudocyst</th>
<th>Serous cyst</th>
<th>MCN</th>
<th>IPMN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Any</td>
<td>Females&gt;males</td>
<td>Only females</td>
<td>Any</td>
</tr>
<tr>
<td>Imaging</td>
<td>single cyst</td>
<td>honeycomb</td>
<td>macrocystic</td>
<td>pancreatic duct communication</td>
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<tr>
<td>Fluid</td>
<td>thin, opaque</td>
<td>thin, clear</td>
<td>viscous, mucin</td>
<td>viscous, mucin</td>
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<td>Amylase</td>
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<td>normal</td>
<td>normal</td>
<td>elevated</td>
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<tr>
<td>CEA</td>
<td>normal</td>
<td>normal</td>
<td>elevated</td>
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<tr>
<td>Cytology</td>
<td>inflammatory</td>
<td>cuboidal cells</td>
<td>columnar, mucin</td>
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<td>Malignant potential</td>
<td>no</td>
<td>negligible</td>
<td>yes</td>
<td>yes</td>
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</tbody>
</table>
Management of Pancreatic Cysts
If not mature no intervention unless infected

Mature pseudocyst:
- Asymptomatic and uncomplicated – Observe
- Symptomatic or with complications – Intervention
  - Surgical drainage
  - Endoscopic drainage
  - Percutaneous drainage
Serous Cystadenoma

- Asymptomatic – Observation (repeat imaging if symptoms)

- Symptomatic – Resection
  - Pancreaticoduodenectomy
  - Distal pancreatectomy
  - Central pancreatectomy
Mucinous cystic neoplasm

- No role for observation unless not fit for surgery
- All need resection
  - Pancreaticoduodenectomy
  - Distal pancreatectomy
IPMN

- Main duct IPMN – Resection

- Branch duct IPMN:
  - Symptomatic
  - Main pancreatic duct >7mm
  - Cyst > 3 cm
  - Mural nodules
  - Cytology suspicious for malignancy
Thank you