

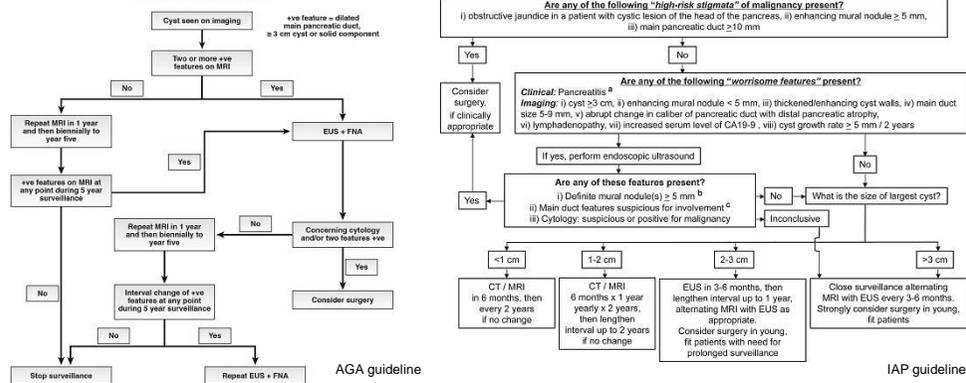
Pancreatic cysts – can investigations be safely rationalised?

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Introduction

Pancreatic cysts are a frequent incidental finding on cross-sectional imaging of the abdomen. We examined the decision making and outcome of patients with a pancreatic cyst(s) discussed at the Royal Derby Hospital HPB cancer MDT and compared practice against the 2015 American Gastroenterology Association (AGA)¹ and 2017 International Association of Pancreatology (IAP)² guidelines on the management of pancreatic cysts.

Management of Asymptomatic Neoplastic Pancreatic Cysts
Clinical Decision Support Tool



Results (1)

88 patients (51 female, 37 male), with a median age 72 years (range 32-87) and median probability of 10-year survival based on the Charlson Comorbidity Index was 53% (range 0-98%).

Imaging

86% of pancreatic cysts were judged to be an incidental finding. The median cyst diameter was 23mm (range 4-105mm). 11 patients had an MRI, 75 patients had a CT (with no MRI) and 2 patients had an ultrasound scan only.

EUS

43/88 (49%) patients proceeded to endoscopic ultrasound (EUS), with 33 having a fine needle aspiration (FNA) for cytology/CEA/Amylase. 4/88 (5%) patients had probably malignant (C4) or malignant (C5) cytology. All 4 patients had "high risk stigmata" on their initial CT/ MRI.

Post-EUS, there were no major complications and no 8-day unplanned admissions. One patient died within 30 days post-EUS – an 87 year old, diagnosed with an inoperable pancreatic adenocarcinoma and a Charlson Comorbidity Index of 2%.

Final MDT recommendation

For most patients no further intervention (57%) or follow-up imaging (35%) was recommended. 6 patients were offered surgery and 1 patient oncological treatment.

Results (2) – assessment against guideline standards

IAP guidelines

Based on the 2017 IAP management algorithm, 14 (16%) patients had "high-risk stigmata" on CT/ MRI. Except where their performance status or co-morbidity precluded further investigation/ treatment (6), all patients were recommended for either surgery (1) or EUS (7).

Of the remaining 74 patients, 43 (58%) had no worrisome features on CT/ MRI and so did not require EUS based on IAP guidelines. 18/43 (42%) of these patients in our practice underwent EUS, with none demonstrating worrisome EUS findings (definite mural nodules, main duct involvement) or suspicious/ positive cytology.

AGA guidelines

The 2015 AGA management algorithm could only be applied to those patients who had undergone initial radiological assessment with MRI (n=11). None of these patients had two positive features on MRI, indicating a need for EUS. 6/11 (55%) patients in our practice did have an EUS, with none identifying positive features or concerning cytology.

Conclusion

These findings suggest that a significant proportion (21/88, 24%) of patients with pancreatic cysts underwent unnecessary EUS.

Application of both International and American guidelines can safely reduce the number of patients who require an endoscopic ultrasound and thus better utilise resources and reduce the risk of potential complications.

Declarations of relationship with industry: None.

References

1. Vigns S.S. et al. 2015. American Gastroenterology Association Institute Guideline on the Diagnosis and Management of Asymptomatic Neoplastic Pancreatic Cysts. Gastroenterology, 148:819-822
2. Terada, M. et al. 2017. Revisions of international consensus Fukuoka guidelines for the management of IPAN of the pancreas. Pancreatology, 17: 738-753
3. MDCalc. 2018. Charlson Comorbidity Index (CCI). [online] Available at: <https://www.mdcalc.com/charlson-comorbidity-index-cci/> [Accessed 29 March 2018].

Method

All Royal Derby Hospital HPB MDT meeting reports, between January 2016 to October 2017 (n=1144) were searched in order to identify those relating to the first discussion of a pancreatic cyst (n=88).

Electronic patient records were examined to determine the presence of jaundice or pancreatitis, serum CA 19-9, cyst fluid CEA, Amylase and cytological grade. Information on the number and location of pancreatic cysts, cyst size, duct dilatation and presence of any solid component was taken from radiological reports, and any discrepancies discussed with a consultant radiologist.

ECOG performance status, final diagnosis and patient outcomes were ascertained from review of MDT reports and clinic correspondence.

Recorded medical comorbidities were used to calculate a Charlson comorbidity index³. This provided an estimated probability of 10-year survival for each patient.

The management decisions for all 88 patients were then assessed against the standards of the 2017 IAP guideline² Patients who underwent investigation by MRI scan (n=11) were also assessed against the 2015 AGA guideline¹.

