



ORIGINAL

Prevalence of incidental clinically relevant pancreatic cysts at diagnosis based on current guidelines



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KEYWORDS

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Abstract

Background: Most pancreatic cysts (PCs) found incidentally by CT and MRI scans might not be clinically important according to the Fukuoka guidelines, the American Gastroenterological Association (AGA) guidelines and European guidelines.

Aims: To determine and compare the prevalence of incidental clinically important PCs (CIPCs). **Methods:** Abdominal contrast-enhanced CT or MRI scans performed during a one-year period were retrospectively reviewed to identify incidental PCs. CIPCs were defined as those cysts that would be capable of triggering further evaluation with endoscopic ultrasound, immediate surveillance (within 3–6 months) and/or surgery. Prevalence was calculated as the number of patients with CIPCs per 100 subjects imaged (%).

Results: Sixty patients (mean age 70 ± 14 years) out of 565 were found to have incidental PCs, representing a prevalence of 8.7% (95% CI 6.3–11.5) in CT scans and 27.5% (95% CI 16–41) in MRI scans. Seven patients (11.6%, 95% CI 5–22) had CIPCs based on size ≥ 30 mm (n=5), size ≥ 30 mm and pancreatic duct (PD) dilation (n=1) and PD dilation and presence of solid component (n=1). Based on the Fukuoka guidelines, the prevalence of CIPCs was 1.2% (95% CI 0.4–2.5) in CT scans (6/507) and 1.7% (95% CI 0.1–9) in MRI scans (1/58). Based on the AGA and European guidelines, the prevalence of CIPCs was 0.2% (95% CI 0.1–1) in CT scans (1/507) and 1.7% (95% CI 0.1–9) in MRI scans (1/58). Patients with PCs initially classified as “AGA- or European-positive” had a higher surgical probability and this decision was taken earlier in the follow-up.

Conclusions: In our cohort, the prevalence of important incidental pancreatic cysts was not negligible at around 1% according to current guidelines.

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PALABRAS CLAVE

Quiste pancreático;
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Neoplasias
pancreáticas;
Ecoendoscopia

Prevalencia de quistes pancreáticos incidentales clínicamente relevantes al momento del diagnóstico basada en las guías actuales

Resumen

Antecedentes: La mayoría de los quistes de páncreas (PC) hallados incidentalmente en las tomografías (TC) y las resonancias magnéticas (RMN) podrían no ser clínicamente importantes de acuerdo con las actuales guías Fukuoka, American Gastroenterological Association (AGA) y europea.

Objetivos: Determinar y comparar la prevalencia de PC incidentales clínicamente importantes (CIPCs).

Métodos: Se revisaron retrospectivamente las TC de abdomen con contraste y las RMN durante un período de un año para identificar PCs incidentales. Los CIPC se definieron como aquellos quistes que serían capaces de desencadenar una evaluación ulterior con ecoendoscopia, vigilancia en un corto intervalo (3-6 meses) y/o cirugía. La prevalencia se calculó como el número de pacientes con CIPC por cada 100 sujetos estudiados (%).

Resultados: Se encontró que 60 (edad media 70 ± 14 años) de 565 pacientes tenían PC incidentales, lo que representó una prevalencia de 8,7% (IC95% 6,3-11,5) en las TC y 27,5% (IC95% 16-41) en las RMN. Siete pacientes (11,6%, IC95% 5-22) tenían CIPC basados en el tamaño ≥ 30 mm (n=5), tamaño ≥ 30 mm y dilatación del conducto pancreático (PD) (n=1), y dilatación de PD y presencia de componente sólido (n=1). Basándonos en la guía Fukuoka, la prevalencia de CIPC fue de 1,2% (IC95% 0,4-2,5) en las TC (6/507) y 1,7% (IC95% 0,1-9) en las RMN (1/58). Basado en las guías AGA y europea, la prevalencia de CIPC fue de 0,2% (IC95% 0,1-1) en las TC (1/507) y 1,7% (IC95% 0,1-9) en las RMN (1/58). Los pacientes con PC inicialmente clasificados como "AGA o europea positivo" tuvieron una mayor probabilidad quirúrgica y esta decisión se tomó antes en el seguimiento.

Conclusiones: En nuestra cohorte, la prevalencia de quistes pancreáticos incidentales y relevantes no fue despreciable, siendo cercana al 1% según las guías actuales.

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Introduction

Most pancreatic cysts (PCs) are found incidentally in cross sectional imaging. Current high-resolution computed tomography (CT) and magnetic resonance imaging (MRI) allow identification of PCs in patients imaged for diseases unrelated to the pancreas, and its prevalence is supposed to be between 2-20% depending on patient's age and type of scan.¹⁻³

PCs are considered to be a risk factor for pancreatic cancer which is difficult to detect in early stages. In addition, incidental PCs are associated with an increased risk of adenocarcinoma that would be three times higher than controls.⁴

Although the clinical behavior of the PCs is uncertain and controversial, most of these incidental pancreatic cystic lesions might not be clinically important according to the most common guidelines currently used: the Fukuoka guideline,⁵ the American Gastroenterological Association (AGA) guideline,⁶ and the European guideline.⁷

In 2013, the European experts consensus statement⁷ established that the presence of symptoms related to the pancreas, mural nodules, dilation of the main pancreatic duct > 6 mm, cyst rapidly increasing in size, or elevated serum levels of carbohydrate antigen (CA)19-9 were risk factors for the presence of malignancy in branch duct-intraductal papillary mucinous neoplasias.

In 2015, the AGA guideline⁶ defined that asymptomatic patients with PCs should have at least two high risk features (size greater than 30 mm, dilation of the main pancreatic duct, or solid component) in order to consider them as having relevant alert signs, and recommended further evaluation in the short term or surgery only in this subgroup of patients.

In 2017, the Fukuoka guideline⁵ was reviewed and updated; it defined the "worrisome features" (cyst size ≥ 3 cm, thickened/enhancing cyst walls, main pancreatic duct size between 5-9 mm, enhancing mural nodule < 5 mm, abrupt change in caliber of pancreatic duct with distal pancreatic atrophy, lymphadenopathy, elevated serum level of CA 19-9, and rapid rate of cyst growth > 5 mm/2 years) and the "high risk stigmata" (obstructive jaundice, enhanced mural nodule ≥ 5 mm, main pancreatic duct ≥ 10 mm) as important features in patients with mucinous PCs, and recommended further evaluation (endoscopic ultrasound with fine needle aspiration (EUS-FNA) and surveillance in a short interval with MRI or CT scan) or surgery in patients with at least one of these features.

The presence of any cystic lesion in the pancreas causes concern and anxiety in patients, especially if the characteristics of the lesion demand more evaluations and procedures. Many studies have evaluated the accuracy of these guidelines^{8,9} to detect advanced lesions and minimally invasive cancer. Considering that these guidelines

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