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: (Intraductal papillary mucinous tumor, IPMT)
(endoscopic ultrasonography, EUS)

: 3 , IPMT EUS 7

. EUS ,

: , 2 , 가 2 , 3 , 3

, 4 . EUS 2 가

2 가 3 1 , 2 가

EUS , ,

(n=2), 3 - 4mm , 5 -

15mm(9.7mm) , 12mm, 14mm

: IPMT 가 , ,

EUS , IPMT

: Pancreas, cysts
Pancreas, neoplasms
Ultrasound (US), endoscopic

가 가 ,
가 가 .
가 ,

1982 Ohashi [1]
(Intraductal papillary mucinous
tumor of the pancreas, IPMT) ,

: 2000 8 7 , : 2000 10 5 , : 2001 1 19 , : 2001 3 12
2000
: , (135 - 270) 146 - 92
Tel. (02)3497 - 3510 Fax. (02)3462 - 5472 E - mail: kwkimYD@yumc.yonsei.ac.kr

(, , ,), , 가

IPMT 가 EUS , hard - copy image , 가

가 ERCP 가 1) (6 mm

(endoscopic ultrasonography, EUS)가 ; , 3 - 5 mm; , 2 mm ;), 2)

IPMT () 3) ,

EUS IPMT EUS EUS

3 , EUS 2 , 가 2 , 3 .

IPMT 7 , () 3 , (,

59 - 71 (65) 가) 4 , ,

5 , 가 2 EUS CT 1 , 2 , 2 가

6 , 1 , 2 , 2 가

ERCP MRCP 2 ,

EUS 7.5 MHz GF 1 가 ,

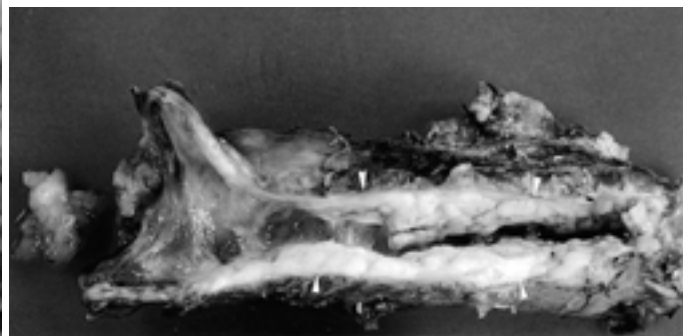
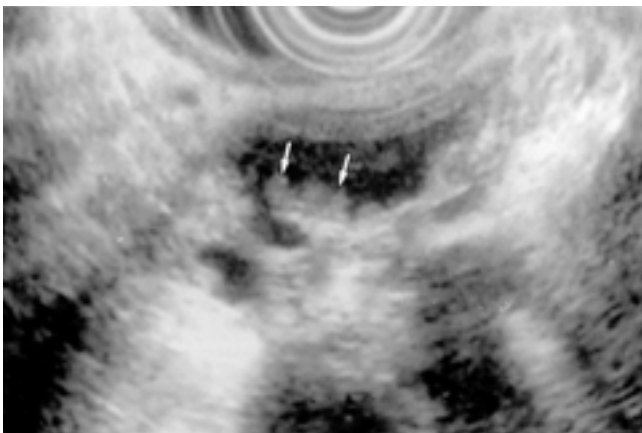
UM2/EU - M2 (Olympus Optical, Tokyo, Japan)

EUS , 2 (Fig. 1)

가 , 2 (Fig. 2) , EUS

3 - 5mg 1 가

midazolam (, ,) 2 EUS가 (3mm),



A **Fig. 1.** IPMT(main duct type, adenocarcinoma). **A.** EUS shows segmental dilatation of the main pancreatic duct with a large mural nodule(arrows). **B.** Gross pathology shows diffuse dilatation of the main pancreatic duct with solitary sessile tumor(arrowheads).

(15mm) , 가
 1 (5mm) 1 (12mm)
 3), 2 , EUS 가
 (Table 1). 5
 EUS 4
 EUS (Table 2, 3),
 IPMT 4 EUS
 (Fig. 2). 5 - 15 mm (
 9.7 mm)

Table 1. Findings According to Subtype of IPMT

	MPD (2)	Branch (2)	Combined (3)
Adenoma/Adenocarcinoma	1/1	1/1	2/1
MPD dilatation			
Diffuse	1	1	1
Segmental	1		
No		1	2
Degree of MPD dilatation			
Severe (>6mm)	1	1	1
Mild (3-5mm)	1		
No (<2mm)		1	2

MPD; main pancreatic duct

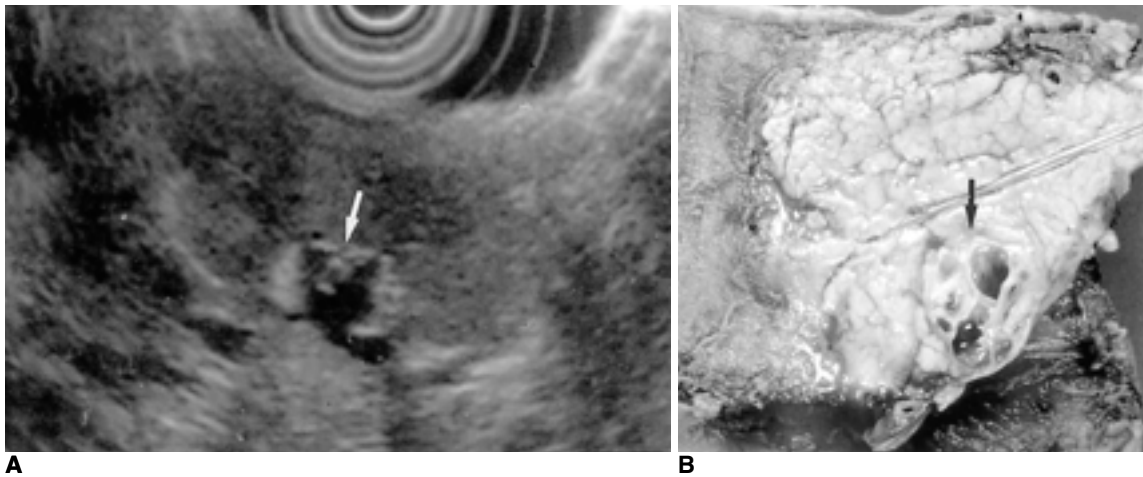


Fig. 2. IPMT(branch duct type, dysplasia)

A. EUS shows small cystic mass with septum at uncinate process of the pancreas(arrow). **B.** Gross pathology shows multilocular cystic mass(arrow) that communicates with the main duct. The lining epithelium of the cyst shows dysplastic change on microscopic examination.

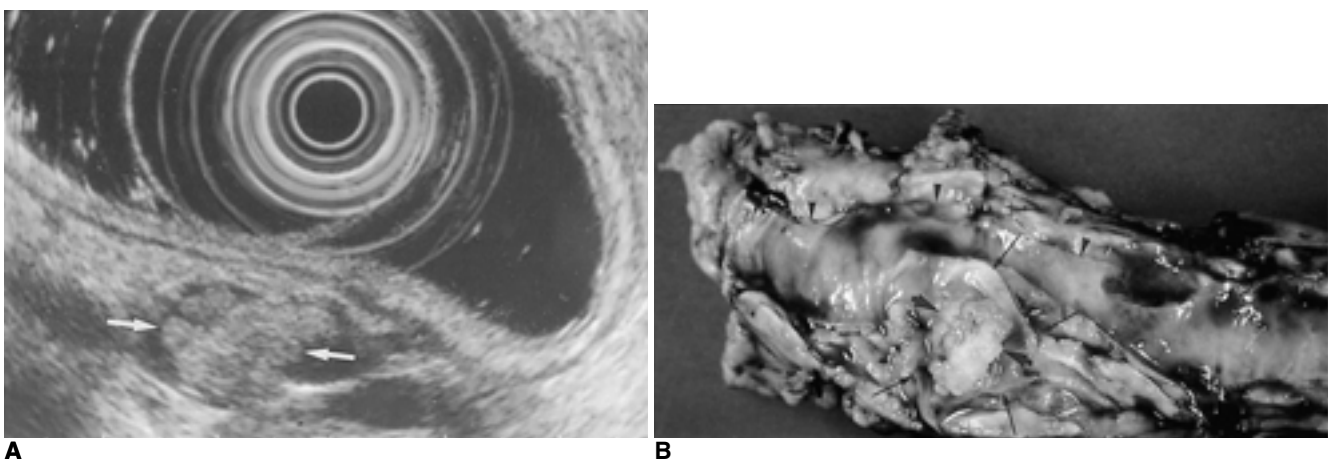


Fig. 3. IPMT[combined type, adenocarcinoma(branch duct) and diffuse adenoma(main duct)]

A. EUS shows diffuse dilatation of the main duct with large papillary mural nodule(arrow). The mural nodule was thought to be in the dilated main duct at the time of procedure. **B.** Gross pathology shows dilated main duct(arrowheads) and a marked dilated branch duct(long arrows) with large mural nodule(short arrows).

Table 2. Findings of Benign IPMT

Case No	Subtypes	Mural Nodule	MPD dilatation
1	MPD	No	No
2	Branch	4mm	No
3	Combined	No	No
4	Combined	3mm	No

MPD; main pancreatic duct

Table 3. Findings of Malignant IPMT

Case No	Subtypes	Mural Nodule	MPD dilatation
1	MPD	14mm	15mm
2	Branch	No: false (-)	5mm
3	Combined	12mm	9mm

MPD; main pancreatic duct

2 EUS 2 3mm, 4mm
12mm, 14mm (Fig. 1, 3).
1 EUS EUS
IPMT
carcinoma
Loftus [3]
IPMT (invasive)
27% - 33%
IPMT [3 - 5].
Loftus [3] IPMT
Yamaguchi [6]
[7].
Uehara [8] EUS pancreatography,
Sugiyama [9] IPMT US, EUS, CT, ERCP,
MRCP 15mm 가
30mm 가
64%

Irie [10] MRCP
15mm Sugiyama
[11] EUS가
(> 30mm),
(> 10mm),
EUS가 US ERCP
가
IPMT
EUS (9.7mm)
가
3,4mm
12mm 14mm 가
EUS
EUS
EUS 1 EUS
EUS , IPMT
가
2 가
EUS
가
IPMT EUS ,
IPMT

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= Abstract =

Intraductal Papillary Mucinous Tumor of the Pancreas: Usefulness of Endoscopic Ultrasonography in Differentiation of Benign and Malignant Neoplasm

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PURPOSE : The purpose of this study was to evaluate the usefulness of endoscopic ultrasonography (EUS) in the differential diagnosis of benign and malignant intraductal papillary mucinous tumor of the pancreas.

MATERIALS and METHODS : Seven patients with intraductal papillary mucinous tumor of the pancreas confirmed by operation underwent EUS. After evaluation of findings of EUS, these observations were compared with pathologic findings, and then reevaluated them according to the histologic grade of malignancy.

RESULTS : According to the pathologic specimens, three cases of them were malignant and the remaining 4 cases were benign. The subtypes of them were as follows: 2 main duct type, 2 branch duct type, and 3 combined type. All malignant tumors showed the main pancreatic duct dilatation (5-15 mm, mean 9.7mm), whereas all benign tumors showed no dilatation of the main pancreatic duct on EUS. The mural nodules of the malignant tumors (12-14mm) were significantly larger than those of benign lesions (3-4mm), significantly.

CONCLUSION : EUS is useful for diagnosing intraductal papillary mucinous tumor of the pancreas, particularly for predicting malignancy.

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