

Endosonography; Differentiation of Malign and Benign Pancreatic Cysts

Aliye Soylu, Hakan Yıldız, Serdal Çakmak, İsa Sevindir, Deniz Koç, Genco Gençdal

Background: Pancreatic cystic lesions (PCLs) are increasingly found in clinical practice because of the widespread use of imaging modalities. Although differential diagnosis of malign and benign of pancreas cysts is not certain markers; endosonography which has been taken place in cyst management showing morphologic speciality of cyst and of cyst fluids by fine-needle aspiration(FNA). In our clinical EUS and EUS FNA performed patients were evaluated to pancreas cyst features for differentiation of premalign and malign.

Method: In our clinic, between may 2014-july 2015 , 60 patients with PCLs undergoing EUS were enrolled this study and retrospectively evaluated. Patients were recorded with undergoing pancreatitis, diabetes mellitus , hematologic and biochemical parameters. EUS evaluation of PCLs were noted according to size, focal irregularity, wall thickness, any papillary projections, relationship of main pancreatic duct, and echo-dens mucus or debris. EUS-FNA fluid was evaluated with biochemical(amylase, CEA, CA 19-9) and cytology.

Findings: In this study, patients that enrolled were main age 58,6±14,6 and 26(%43.3) female. EUS-FNA were performed in %40 of patients. Finally, 73.3% of benign cases, 26.7% were found to have malignant or premalignant. In benign and malign/pre-malign groups compared to each others were described value of age(0.002), alkaline phosphatase (p.0.001) and gamma glutamyl transferase (p:0.004) high and hemotocrit(p.0.001) and albumin(p.0.001) low in malign groups.

Blood tumor markers were not different for the groups, CA 19,9(P.0518), CEA(P.0.376) and CA 125(P.0.518).(Table 1-2-3). Differentiation of PCLs in the benign group were atypical pseudocyst (%61.3), serous cystadenoma(%20.4) and, simple cyst(18.1). In malign group were IPMN(%26.7), %18 mucinous cystic neoplasm , and %25 adeno cancer.

The Septation in the benign group were 25% and 56.2% in patients with the malignant group (p=0.023). Cyst lobulation was %25 in the benign groups and %56.2 in the malign group(p=0.014). According to mural nodularity was %2.5 in the benign group and %26.7 in malign group(p=0.005)

Conclusion: In majority of patients needed EUS-FNA that eus and clinical investigation were insufficient for final diagnosis were benign. This situation is thought that management of PCLs for clinician poses still problems.

At same time , applicable FNA in managemant of EUS patients helped to differentiation of between malign and benign situation.

Cholestasis findings in the malign PCLs are more common than the benign group

PCLS with localisation of pancreas head and accompanying anemia were associated with rates of higher malignancy

In our study, presence of mural nodularity and cyst septation in PCLs were found effective in differentiation of pre-malign and benign as in other studies. In addition, We think that cyst lobularity may help to differentiation of premalignant and benign.

Variables	Benign(n:44)	Malign(n:16)	P value
Age	55,6±15,1	67±8,92	0,008
Sex(F/M)	26(59,1)/18(40,9)	8(50)/8(50)	0,530
Pancreatitis	20(50)	4(26,7)	0,120
Diabetes	7(18,4)	4(30,8)	0,350
Cyst localization			
Head	17(%41,5)	9(%64,3)	0.140
Korpus	16(%39)	4(%28,6)	0.483
Tail	5(%12,2)	1(%7,1)	0.601
Uncinat	3(%7,3)	0	0.298
Cyst Size	29,1±21,1	30,4±17,4	0.598
Cyst lobulation	10(%22,7)	9(56,2)	0.014
Cyst septation	11(%25)	9(%56,2)	0,023
Cyst nodularity	1(%2,5)	4(%25)	0.005
Htc	39,3±3,7	31,8±5,1	0.001
Plt	242±70	276±99,6	0,106
GGT	32(6-107)	80(16-351)	0,004
ALP	82(58-144)	179(82-432)	0,001
ALB	4,3±0,49	3,4±0,65	0.001
Cyst Size	29,1±21,1	30,4±17,4	0.598
Cyst lobulation	10(%22,7)	9(56,2)	0.014
Cyst septation	11(%25)	9(%56,2)	0,023
Cyst nodularity	1(%2,5)	4(%25)	0.005