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that is coupled to the end of the apparatus, and enables the realization of ultrasound within the digestive tract [13].

According to the scanning method, this test is classified into radial or linear, and according to clinical indication, in diagnostic or therapeutic. Diagnostic indications include sub-epithelial abnormalities, cancer staging and evaluation of pancreatic and biliary diseases as therapeutic procedures involve as drainage of pancreatic pseudocyst and neurolysis of the celiac artery [14,8]. However, the main obstacle on imaging studies is that there are features that allow differentiation. In addition, despite the impact of the information obtained through this examination in the management of patients with LCP, endoscopic ultrasound is still restricted to a few and large centers in Brazil [15,13].

Studies have shown that isolated tests such as CT and MRI did not have accuracy in differentiating types of LCP [16]. The pancreas is well viewed by both techniques, radial or linear, due to the anatomical situation and direct apposition of the transducer in the gastric and duodenal wall immediately above or next to it [17]. EUS allows detailed study of the parenchyma and pancreatic duct to the fullest extent of the gland without bringing gas or abdominal fat, may identify previously undetected lesions and thereby clarify abnormalities detected by CT and MRI, and is currently considered the gold standard for evaluation of this organ [18,8].

This test is important in the study of these injuries, because the best image in the characterization of cyst morphology (presence of nodulation in the cyst wall, solid component associated) and because of the possibility of biopsy fine needle with collection of material for analysis [19,20]. The puncture of the LCP guided by endoscopic ultrasound with cytological analysis of the aspirate has been used to increase diagnostic accuracy; especially in differentiating adenoma macrocystic serous and mucinous adenoma [21].

Regarding the potential for malignancy, pancreatic cysts are extremely variable. Some are benign and can be handled conservatively while others are malignant or pre-malignant lesions often require surgical treatment [22,23]. Diameter greater than 3 cm and / or the presence of mural nodules appear to be the greatest indicators of malignant transformation [22,24].

Considering the importance of studies on the clinical application of Biopsy guided by endoscopic ultrasound in patients with pancreatic cystic lesion justifies this research because the national literature were not found work with this approach. In addition, the endoscopic point of view morphological characteristics of these injuries (area, location and shape) as well as the analysis of fluid extracted by biopsy puncture essential in defining conduct, which may be conservative or surgical [6].

The objective of this research was to investigate the clinical application of Biopsy guided by endoscopic ultrasound in patients with pancreatic cystic lesion, considering demographic, endoscopic and cytological data.

Study Design

We retrospectively studied 24 patients with pancreatic cystic lesion, regardless of sex and race, from the region of São José do Rio Preto, SP, underwent biopsy puncture guided by endoscopic ultrasound. The procedures were performed in the clinic Gastroimagem of São José do Rio Preto, from September/2013 to June/2014. They were considered as exclusion criteria patients with coagulopathy, pregnant women and those gastrectomized. The major difficulties were in relation to the size of the lesion (less than 0.1 cm). In addition, unsatisfactory samples showed the absence of cells and the volume of aspirated liquid, because the laboratory has difficulty in processing less than 0.1 ml of liquid. This study was approved by the Research Ethics Committee of the Portuguese Beneficent Hospital of São José do Rio Preto.

Methods

Before the exam to study and programming of the same consultation took place. All tests were performed after a minimum fasting for 8 hours. With the patient in the left lateral decubitus, intravenous sedation was performed with propofol and adequate cardiopulmonary monitoring during the examination. Then it was introduced echoendoscope Pentax EG-3630U (Pentax, Tokyo, Japan) by mouth. The pancreas was visualized by plotting the apparatus for evaluation of the duodenal bulb of the head of the pancreas and a large curve for evaluation of gastric and pancreatic body tail. The pancreatic duct was measured in the portion of the body and in the area of confluence after splenorenal image freeze on ultrasound. The images were transferred to processing Pentax EPM-3500 and ultrasound Hitachi EUB-525, coupled to computer drive containing the Ikap program (SS computer version 1:53, Porto Alegre, RS).

The ecoguide of the punctures were performed using only 22G needle, and the collection and processing of medical liability endoscopist material. There was no pathologist present in the procedure room for evaluation of the material during the examination. The material was sent to the pathology laboratory Lapat, São José do Rio Preto, SP on the same day of collection. All the collected material was evaluated for cytology.

Statistical Analysis

When the patient recovered his level of consciousness, it was released along with her companion. In assessing the ultrasound area because the area in mm^2 not follow Gaussian distribution according to the factors, it used the natural logarithm, and the analysis done on this scale, because then the variable has lognormal distribution. In the average data analysis were compared by t-test (two-sample t), when they were two categories in comparison, and analysis of variance (ANOVA one way) to a classification criterion. Associations were assessed in cross frequency tables using the chi-square test of Pearson, and the chi-square for distance Hellinger. The association between

Figure 1: Comparison of demographic, endoscopic and cytological

Unsatisfactory	3 (30.0%)	5 (50.0%)	2 (20.0%)	10(100%)	
Total	11(45.8%)	9 (37.6%)	4 (16.6%)	24(100%)	

Table 1: Comparison of results between demographic, endoscopic and cytopathologic using the chi-square test for distance Hellinger.

Comparing the area of pancreatic cystic lesion depending on the location, there was a larger area in the body over the head and tail, not being a significant difference (p=0.20) (Table 1). The result of the comparison between area and cytological results showed larger area in malignant lesions, with no significant difference (p=0.20) (Table 1). The analysis of age by sex showed that males have a higher age (p=0.24) and significantly higher average natural logarithm of the ultrasound area (p=0.029) than females. Because of the log is increasing function it follows that if there is evidence of the arithmetic mean of the logarithm be higher in men (Figure 4).

Figure 4: (Top Left) Endoscopic ultrasound showing cystic lesion in patient pancreatic head male (49 years). (Top Right) Endoscopic Ultrasound showing heterogeneous cystic lesion with septa in pancreatic head on female patient (44 years). (Bottom) Echoendoscopy puncture pancreatic cystic lesion in the body of a female patient (51 years old).

Rio Preto SP and the entire endoscopy team at Santa Casa de Misericordia Hospital of Sao Jose do Rio Preto SP.

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