

Assessment of the presence of pancreatic intraepithelial neoplasia in various diseases of this organ

Zińczuk J.^{1A,C,D}, Zaręba K.^{2B,C}, Konarzewska-Duchnowska E.^{3C}, Guzińska-Ustymowicz K.^{1A}, Kędra B.^{2B}, Kemon A.^{1E}, Poczynicz A.^{1E,F}

1. Department of General Pathomorphology, Medical University of Białystok, Poland
2. 2nd Department of General and Gastrointestinal Surgery, Medical University of Białystok, Poland
3. Department of Emergency Medicine and Disasters, Medical University of Białystok, Poland

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ABSTRACT

Purpose: Pancreatic intraepithelial neoplasia (PanIN) is one of the most commonly occurring precancerous lesions in the pancreas that leads to the development of pancreatic ductal adenocarcinoma (PDAC). We assessed the presence and grade of pancreatic intraepithelial neoplasia in the course of various diseases of the pancreas and its correlations with chosen clinicopathological parameters.

Materials and methods: We reviewed postoperative tissue samples and clinicopathologic data of patients who were diagnosed due to different pancreatic lesions from January 2008 to June 2014 at the Department of General Pathomorphology of the Medical University in Białystok (Poland). All slides were reviewed by two independent pathologists for the presence and grade of PanIN lesions.

Results: A total of 276 foci of PanIN were identified in 94 patients. The most common lesions

were PanIN 1a and PanIN 1b, which together constituted 68.2 % of all lesions; whereas PanIN 2 was present in 21.7%, and PanIN 3 in 10.1% of patients. No statistical differences were observed in sex tendency for the development of PanINs. There was a correlation between patient age and degree of PanIN ($p>0.05$). There was no statistical difference in the PanIN frequency among patients with pancreatic ductal adenocarcinomas, neuroendocrine tumors, chronic pancreatitis, and pancreatic cysts.

Conclusions: Our study showed that age is an important factor in the development of pancreatic intraepithelial neoplasia, and the presence of PanIN in non-neoplastic diseases in older people should be included to the group with increased risk of cancer development.

Keywords: Pancreatic intraepithelial neoplasia, PanIN, pancreatic ductal adenocarcinoma, pancreatic cancer, chronic pancreatitis

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