

Comment

Chronic pancreatitis (CP) is a progressive inflammatory disease of the gland characterized with non-reversible morphologic changes, like progressive destruction of exocrine and endocrine parenchyma, as well as ductular structures, followed with fibrosis and pancreatic exocrine and endocrine function impairment. The correlation between structural and functional changes is often poor. Pancreatogenic diabetes is often recognized late in the course of the disease, often when its complications are already present.

Advanced stages of CP are easily diagnosed with imaging techniques, as ultrasound, computed tomography or endosonography (EUS). On the other hand, despite the significant progress in the knowledge on chronic CP pathogenesis, an early detection of the disease is rarely possible.

Pancreatic cancer (PC) accounts for 3% of all malignant neoplasms diagnosed each year in the world and is the 4th most common cause of cancer deaths. The aggressive course, late diagnosis and resistance to treatment result in 5 year survival lower than 5% and very high mortality in the 6 months period after diagnosis. At the diagnosis 80-90% patients have an advanced disease and the tumor is non-operable. Numerous studies concentrate on developing specific and sensitive diagnostic and prognostic marker of PC, but the results are unsatisfactory yet.

In this issue of "Postępy Nauk Medycznych" the important and not clearly elucidated problem of coexisting diabetes in CP and PC is being analysed in the article titled "The emergence of carbohydrate metabolism disorders in the course of pancreatic adenocarcinoma (PC) and chronic pancreatitis (CP) – assessment of insulin level and insulin resistance" by Włodarczyk et al. It shows that the oral glucose tolerance test allows the early detection of endocrine pancreatic disorders in patients with CP and PC in absence of clinical symptoms of diabetes. In addition, hyperinsulinemia was detected more often in PC patients, and reduced insulin secretion – CP, which may provide the additional tool in the difficult task of CP and PC differentiation.

In the article "Usefulness and limitations of core biopsy in pancreatic tumors diagnostics – retrospective analysis" by Gwoździwicz et al. the significant number of pancreatic core biopsy is reported. As opposite to fine-needle biopsy cytology, the final diagnosis was obtained in the majority of patients with relatively low number of procedure complications. It should be stressed that this method is highly operator-dependent and requires very close cooperation with experienced pathologist.

The following paper by Winiarczyk et al., titled "Is hyperoxaluria in a porcine model of Roux-en-Y gastric bypass (RYGB) associated with exocrine pancreatic insufficiency?" aimed at evaluating the usefulness of the surgical pig model of human Roux-en-Y gastric bypass in studying the functional complications of the procedure, like enteric hyperoxaluria and exocrine pancreatic insufficiency, in particular. The interesting concept of the possible role of exocrine pancreatic insufficiency in the development of enteric hyperoxaluria is being proposed.

Kołodziejczyk et al. in an article titled "Abdominal trauma before the onset of chronic pancreatitis-cause of disease or fortuity" analysed the large number of children with CP as regards to the role of trauma as the disease etiological factor. Since in most of the children with history of trauma other CP etiological factors have been found its role as a single factor in the disease development has been challenged.

The next case report in this issue represents the retrospective review of the medical records and images of patients who underwent surgery for the rare pancreatic pseudopapillary tumor (SPT). This is worth mentioning since those tumors are being rarely detected in Poland.

Very interesting new method of advanced pancreatic cancer treatment is being presented by Studniarek et al. in "Indications, contraindications and risk-related to irreversible electroporation (IRE) of pancreatic cancer". The important advantage of this palliative procedure is that this is nonthermal and only the pancreatic cancer cells and not the connective tissue stroma as well as vessels and nerves are being damaged as opposite to former ablative methods. In the presented cases the procedure resulted with the significant reduction of pain and tumor mass with no local complications. The author is the most experienced in this technique in Poland and he postulates induction of this technique earlier in PC clinical course.

Very interesting issue of the role of pancreatic exocrine insufficiency (PEI) in the development of neurological alterations related to cognitive function, like depression and sleep disturbances have been documented in the

next innovative article by Goncharova et al. "Exocrine pancreatic-brain axis-studies on pig models". On one hand in newborn piglets the physiological PEI enables absorption of macromolecules including immunoglobulins necessary for the appropriate maturation of central nervous system and microgliogenesis. On other hand in adult pigs the surgically induced PEI resulted with reduction of pyramidal neurons in hippocampus and glial cells and subsequently – their aberrant behaviour. Increasing of the fat content in the diet has been suggested. This is one of the very few analyses, including new hypotheses, of this very important subject, definitively needing further evaluation.

Pancreatic diseases are highly debilitating and decreasing the quality of life, however the research progress does not ameliorate enough the patient's management. There is a strong need for further extensively evaluations, both basic and clinical in this important area.

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