

Epidemiology of acute pancreatitis in Poland – selected problems

Epidemiologia ostrego zapalenia trzustki w Polsce – wybrane problemy

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Słowa kluczowe: epidemiologia, ostre zapalenie trzustki, częstość, śmiertelność.

Abstract

In recent years in many European countries, an increase has been observed in the incidence of acute pancreatitis (AP). Analysis of the results of scarce Polish epidemiological studies suggests that Poland belongs to the countries with the highest incidence rate – 72.1/100 000. The incidence rate in the Kielce region is 99.9/100 000 and 79.7/100 000 patients who experienced the first episode of pancreatitis. The main cause of contracting the disease is gallstones, responsible for 34% of cases, while alcohol is the cause of AP in 24.1% of patients. In recent years, an increase has been noted in the incidence of AP with a severe course. Although in the majority of patients the course of the disease is mild, in the severe form mortality remains within the range 30–60%.

Streszczenie

W ostatnich latach obserwuje się wzrost zachorowań na ostre zapalenie trzustki (OZT) w wielu krajach. Analiza wyników nielicznych polskich badań epidemiologicznych pozwala przypuszczać, że Polska należy do krajów o jednym z najwyższych współczynników zachorowalności – 72,1/100 000. Współczynnik zachorowalności w województwie świętokrzyskim wynosi 99,9/100 000. Po raz pierwszy na OZT chorowało 79,7/100 000 osób. Główną przyczyną zachorowania polskich pacjentów jest kamica żółciowa, która odpowiada za 34% przypadków. Alkohol jest przyczyną OZT u 24,1% chorych. Stwierdza się ponadto wzrost częstości występowania OZT o ciężkim przebiegu. Chociaż u większości pacjentów choroba ma przebieg łagodny, to w przypadku ciężkiej postaci śmiertelność kształtuje się na poziomie 30–60%.

Introduction

In recent years, many studies have been published concerning the increase in the incidence of acute pancreatitis (AP) in European countries. The collected epidemiological data have been presented in a report by the United European Gastroenterology Journal [1]. Within the last 25 years, the mean increase in morbidity has been from 5.7% in the Netherlands to 2.2% in Sweden. The reported incidence rates differ greatly, not only in various countries, but also within individual countries. This may be related to different numbers of patients enrolled in the studies (limitation of epidemiological studies to one centre or region of the country) and various times of observation. Some studies provide information concerning the relationship between AP and the time of the year, or seasonal factors, e.g. Christmas or New Year [2] (Table 1).

To date, in Poland, two studies have been published concerning the incidence of AP [12, 13]. The main source of data about hospitalization of patients with AP may be information technology resources by the National Health Fund, and the published complex analysis of the system of Homogeneous Patient Groups, pertaining to the services provided throughout the whole territory of Poland, with the possibility to review the results divided by individual Regional Agencies of the National Health Fund [14]. In 2014, 23 277 patients were registered who were hospitalized due to AP, including 4,301 cases with a severe course of the disease [14]. In 2014, in Poland, the number of adult Poles was 32 301 931 [15], which means an incidence rate of 72.1/100 000.

In 2012, the authors of this report presented the results of a prospective epidemiological study concerning the Kielce region [13]. The study consisted in the

Table 1. Comparison of incidence of acute pancreatitis in various countries

	Germany [5]	Netherlands [4]	Netherlands [3]	England [7]	Sweden [8]	Ireland [6]	Italy [9]	Norway [11]	Finland [10]
Incidence 100,000/year	13	14.7	15.9	22.4	23.4	23.6	30.6	30.6	73.4

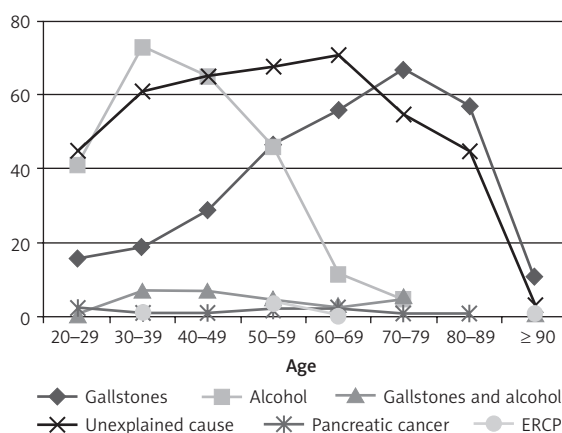
registration of all patients hospitalized due to AP in hospitals located in this region. The data was collected pertaining to the diagnosis, clinical course and causes of AP. In 2011, 1004 patients diagnosed with AP were hospitalized (99.9/100 000 inhabitants of the Kielce Region). Males were hospitalized twice as frequently as females: 628 cases (130.2/100 000 inhabitants of the Kielce region) and 376 cases (72/100 000), respectively. Median age of patients with AP was 53 years (males 47, females 65). The incidence rate dramatically increased in the oldest age groups, and among individuals aged over 60 it was 150/100 000 [13].

According to data from the National Health Fund, in 2014, 949 patients were hospitalized [14]. In accordance with the data from the Main Statistical Office in that year, the number of inhabitants of the Kielce region was 1 018 700 [15], which means that the hospitalization rate was 93.2 per 100 000 inhabitants of the Kielce region. Therefore, the report from the epidemiological study conducted is close to the analysis of patients according to recent data from the National Health Fund.

The precise registration of patients in 2011 allowed records of first time episodes to be kept and the incidence rate to be determined as 79.7/100 000 [13].

Causes of morbidity

The majority of cases of AP are related to gallstones and alcohol abuse [1, 11, 16–18]. Other causes are considerably more rare [19–21]. The highest rates of gallstone-related AP are reported in Mediterranean coun-

**Figure 1.** Causes of acute pancreatitis according to age intervals compiled according to data [4]

tries: Greece, Italy, Croatia and Spain [1]. Alcohol is the most frequent cause of the disease in the countries of Northern and Eastern Europe, as well as in Russia [1, 22]. In the population of Polish patients, the main cause of contracting the disease is gallstones, responsible for 34% of cases, while alcohol is the cause of AP in 24.1% of patients. It is considered as the dominant factor in recurrent AP, especially among males [8]. In a large group of patients (41%) the cause of AP was not determined [13]. A high percentage of unexplained causes of the disease has been reported not only in Polish but also in international research [1, 23]. Alcohol is a frequent cause of the disease in young Poles, mainly males, whereas gallstones is common among older females [13]. Figure 1 presents the distribution of the causes of AP in age intervals.

It is considered that the combination of genetic, environmental and metabolic factors is responsible for the development and recurrence of acute pancreatitis.

Clinical course of acute pancreatitis

In the majority of cases, AP has a mild course, characterized by small organ dysfunction. In approximately 15–20% of patients the disease takes an unfavourable course and may lead to life-threatening multiple organ failure. In recent years, an increase has been noted in the incidence of AP with a severe course [1]. In the published Polish studies, the revised Atlanta classification was considered – a mild course of AP was diagnosed in 80.7%, and a severe course in 7% of patients [13]. Data from the National Health Fund distinguish hospitalizations of patients as mild and severe AP. In 2014, 21.3% of patients with severe AP were hospitalized in Poland, while in the Kielce region 16.8% were hospitalized, which, compared to 2010, means an increase by 2.8% on the Polish scale, and by 5.8% in the Kielce region, according to the data from the National Health Fund [14].

Mortality due to AP which has been reported in recent years ranges from 1% in Australia [23], 1.1% in Germany, up to 11% in the United Kingdom [1]; and in the Kielce region of Poland, it is 3.9%. The mortality rate due to the severe form of the disease reached 52.9% [13].

The editorial presents selected aspects of epidemiology AP which are little disseminated in Polish literature. Previously reported, estimated information did not reflect the current research on the incidence of acute pancreatitis.

Conclusions

The incidence rate of AP in Poland, compared to other European countries, is one of the highest, with an increasing incidence of cases with a severe course. Although in the majority of patients the course of the disease is mild, in the severe form mortality remains within the range 30–60%.

Conflict of interest

The authors declare no conflict of interest.

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