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Diseases of the digestive system as the cause of disability certificates

Abstract

Introduction. The incidence of gastrointestinal system neoplasms increases. Colon cancer is one of the most prevalent neoplasms in men and women. Cardiovascular diseases and cancers are among leading causes of death in Poland. Colon cancer and other gastrointestinal diseases (inflammatory, autoimmune, neoplastic), can be causes of disability too.

Aim. The aim of the study was to investigate the characteristics of 16+ population obtaining disability certificates due to gastrointestinal diseases in Lublin within the last 16 years.

Material and methods. The data from the years 2006-2021 were obtained from the Municipal Disability Adjudication Council in Lublin.

Results. In the years 2006-2021 Municipal Disability Adjudication Council in Lublin issued 76,581 disability certificates. Out of that number 2861 (3.7%) certificates were issued due to gastrointestinal diseases. In the years 2006-2012 mainly moderate degree disability was diagnosed. Since 2013 most of the 16+ patients have been diagnosed with severe disability. Majority of patients were unemployed men with vocational education.

Conclusions. Gastrointestinal tract diseases are in eighth the place among the causes of disability certificates in Lublin. The main cause of disability are musculoskeletal diseases.

More effective screening programs are necessary to prevent avoidable disability due to gastrointestinal diseases.

Keywords: gastrointestinal tract diseases, disability, disability certificate.

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INTRODUCTION

Disability results from the interaction between individuals with a health condition and environmental factors including negative attitudes, inaccessible transportation and public buildings, and limited social support [1]. A person with a disability is a person who is unable to independently, partially or completely, ensure the possibility of normal life, but also social life due to a congenital or acquired physical or mental health problem. The definition of disability was divided into three effects of the disease: impairment, incapacity and limitation in roles. The condition of damage is described as abnormalities in the structure and appearance of the body, as well as in the function of organs and systems that are not dependent on the cause. Incapacity is the result of damage through which the performance of given activities and the activity of the individual are disturbed. Role limitation, on the other hand, is a consequence of damage and incapacity that affect interpersonal interactions and the individual's adaptation to the environment.

So far, the state of disability has been viewed only through the physical aspect, and thus the medical aspect. The focus was only on the improvement of the patient's health and function, and the mental aspects were neglected. For this reason, in 1994

the European Disability Forum of the European Parliament proposed a new definition of people with disabilities as an individual with full rights who finds himself/herself in a handicapped situation due to environmental, economic and social barriers that he/she cannot overcome in the same way as other people. However, these barriers are very often reinforced by depreciating attitudes on the part of society. In 2001, the World Health Organization adopted a definition of a state of disability that includes both physical and psychological aspects in the International Classification of Disability. It includes states of damage, activity limitations and impediments or limitations to participation in social life, which are conditioned by individual and environmental factors. Disability can be divided according to its severity into mild, moderate and severe, or according to its type. There are six types of disability. These are: reduced sensory efficiency, reduced intellectual efficiency, reduced social functioning, communication, reduced mobility, cerebral palsy and reduced psychophysical efficiency [2]

It is estimated that about 16% of the global population – currently experience significant disability [3]. As the population ages, the prevalence of disability increases. In Poland, the most common reasons for disability certificates for people over 16 are diseases of the musculoskeletal system [4].

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At the beginning of the 1990s in Poland, a ranking of the burden of disease expressed in the crude Disability Adjusted Life Years (DALY) coefficient was started. After the publication of the results of research conducted for 30 years, it was found that the number of patients burdened with diseases of the gastrointestinal tract is increasing. Particularly often the cause of disability is colorectal cancer (mainly colon and rectal cancer), pancreatic cancer, gastric cancer, and liver cirrhosis [5]. According to data from the years 1970-2017 presented in the National Cancer Registry, the incidence of gastric cancer in Poland has been declining, while the incidence of colorectal cancer has remained at a similar level since 1970 [6]. Irrespective of gender, gastrointestinal cancers account for nearly 15% of all cancers. For people diagnosed with colorectal cancer, stoma formation is part of the treatment. As a consequence of the above method of treatment, these patients may apply for a disability certificate due to reduced efficiency of social functioning. Another reason for applying for a disability certificate is the impairment of the entire digestive system, i.e. hindering the absorption of nutrients, leading to malnutrition. Oesophageal and gastric cancers often require parenteral nutrition [7]. In inflammatory bowel diseases, such as Crohn's disease or ulcerative colitis, frequent passing of loose stools also impairs the functioning of patients [8].

AIM

The aim of the study was to investigate the characteristics of 16+ population obtaining disability certificates due to gastrointestinal diseases in Lublin within the last 16 years.

METHOD

The data from the years 2006-2021 were obtained from the Municipal Disability Adjudication Council in Lublin.

RESULTS

In the years 2006-2021 Municipal Disability Adjudication Council in Lublin issued 76,581 disability certificates. Out of that number 2861 (3.7%) certificates were issued due to gastrointestinal diseases. Diseases of the gastrointestinal tract are in the eighth place among the causes of disability certificates in Lublin. The leading cause of disability certificates were musculoskeletal disorders. Cardiopulmonary health problems were ranked in the next position followed by epilepsy and neurological disorders.

In the years 2006 till 2013 mainly persons aged 41-60 years applied for and received the disability certificates due to gastrointestinal diseases. From 2014 until 2021 there were mainly 60+ persons applying for the certificate and earning it (Figure 1). During the years 2006-2012 mainly moderate degree disability was diagnosed in this group. Since 2013, the majority of the 16+ patients have been diagnosed with severe disability (Figure 2). The majority of patients were unemployed men (Figures 3,4) with secondary education (Figure 5).

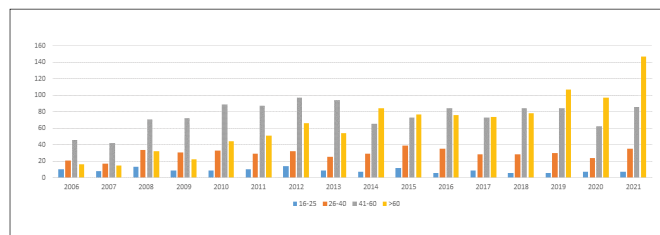


FIGURE 1. Age groups of persons who obtained a certificate of disability due to diseases of the digestive tract in Lublin in the years 2006-2021.



FIGURE 2. Division by degree of disability of persons who obtained a certificate of disability due to diseases of the gastrointestinal tract in Lublin in the years 2006-2021.

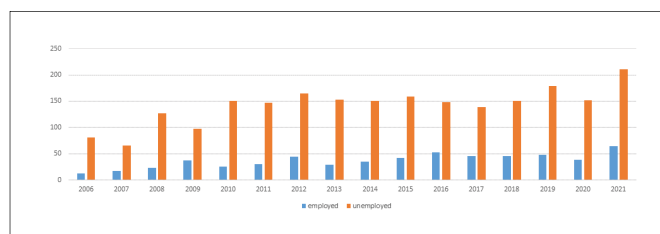


FIGURE 3. Employment status of people who obtained a certificate of disability due to diseases of the digestive tract in Lublin in the years 2006-2021.



FIGURE 4. Gender of persons who obtained a certificate of disability due to diseases of the digestive tract in Lublin in the years 2006-2021.

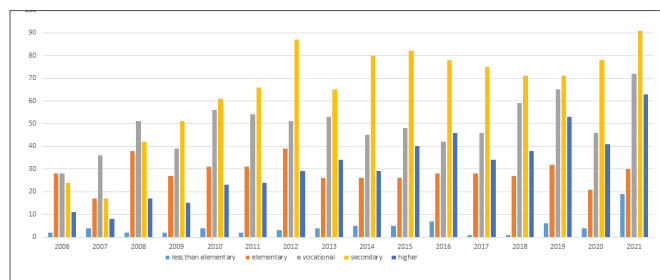


FIGURE 5. Education level of patients who obtained a certificate of disability due to diseases of the digestive tract in Lublin in the years 2006-2021.

DISCUSSION

According to the Polish law regulation, a person can apply for disability certificate due to gastrointestinal diseases with the symbol 08-T if suffers from the diseases of the digestive system including diseases of the oesophagus, conditions after gastric resection for various reasons with numerous complications, chronic intestinal diseases complicated by malabsorption syndrome, chronic liver diseases, chronic pancreatitis, neoplasms of the digestive system [9,10]. In the case of persons

16+ years of age, poviats/city disability assessment teams decide not to pass or include in one of the three disability levels: light, moderate or severe. The significant degree of disability shall include a person with a disturbed body fitness, incapable of work or able to work only in the conditions of sheltered employment and requiring, in order to perform social roles, permanent or long-term care and assistance of other people due to the inability to exist independently. The moderate degree of disability includes a person with a disturbed body fitness, incapable of work or able to work only in sheltered employment conditions or requiring temporary or partial help from other people in order to perform social roles. The slight degree of disability includes a person with a disturbed body fitness, significantly reducing the ability to perform work, compared to the ability of a person with similar professional qualifications with full mental and physical fitness, or with limitations in performing roles compensable by equipping with orthopedic devices, aids or technical means.

In the case of severe and moderate disability, their common feature is the inability to work or the ability to work only in sheltered employment conditions [9,10].

The certificate of the degree of disability may contain indications concerning: suitable employment (including employment in an establishment for professional activity), training (including specialist training), participation in occupational therapy (occupational therapy workshop), supply with orthopedic items, aids and technical aids facilitating the daily functioning of a disabled person, use of social assistance benefits, obtaining a parking card, the right to live in a separate room. The indications depend on the degree of disability, type of disease, age of the person and are also determined in the context of the expectations and aspirations of the disabled person, who determines the purpose of applying for a certificate [11].

The number of cases of gastrointestinal cancer in Poland in the second decade of the 21st century reached over 29,500 (men – 56% of cases), and the number of deaths was nearly 27,000 (men – 55%). About 50% of cancers of the digestive system have a poor prognosis. The 5-year survival rate in Poland exceeds 40% only for colorectal cancer, and usually does not exceed 10% for other cancers. The increase in the number of cases and deaths over the last decade is mainly due to the increased risk of colorectal and pancreatic cancer [12]. The main risk factors for squamous cell carcinoma of the oesophagus in the European and North American population are smoking and alcohol consumption. Environmental factors, including bacterial (*Helicobacter pylori*), and specific genetic changes influence the development of gastric cancer. In addition, risk factors for the development of gastric cancer include a diet containing a lot of table salt, nitrogen compounds, smoking and alcohol consumption.

Small intestine cancers account for less than 0.5% of all malignancies and about 1-3% of gastrointestinal malignancies. Several times higher risk of small intestine cancer is associated with Crohn's disease. It is also elevated in patients with sporadic polyps, familial polyposis syndrome, Peutz-Jeghers syndrome, celiac disease and acquired immunodeficiency syndrome (AIDS). Factors that increase the likelihood of developing the disease include a history of cholecystectomy, smoking and alcohol consumption.

Chronic inflammatory diseases of the digestive tract have environmental (intestinal microbiota disorders), immunological and genetic causes [8]. In the treatment of inflammatory

bowel diseases, glucocorticoids, aminosalicylates, immunosuppressive and biological drugs are used [13]. Many of these therapies carry the risk of side effects: osteoporosis, diabetes, obesity, weakening of the immune system. In addition to the pharmacological treatment, elimination diets are being introduced more and more often. Recent studies have found ample evidence of the role of environmental factors in the onset and maintenance of chronic inflammatory responses in the gastrointestinal tract. Such factors include dietary components that are directly or indirectly involved in the cascade of pathological changes. This is the reason why it is necessary to look for modifications in the diet that have a beneficial effect on the course of these diseases. Unfortunately, data in this regard are ambiguous, and research on the role of diet as a component of therapy is burdened with significant methodological limitations. However, in 2020, the International Organization of the Study of Inflammatory Bowel Disease shared guidelines that should be followed when arranging diets for sick people. In the case of Crohn's disease, experts recommend regular consumption of vegetables and fruits, and limiting products high in saturated fats, trans fats and food additives such as maltodextrin, artificial sweeteners and sulfites.

In addition, in ulcerative colitis, care should be taken to introduce natural sources of omega 3 fatty acids and avoid red and processed meat. For people with persistent functional symptoms but no inflammatory disease activity, a low Fermentable Oligosaccharides, Disaccharides, Monosaccharides And Polyols (low FODMAP) diet or a lactose-free diet may be considered [14]. It has also been proven that in inflammatory diseases of the digestive system there are many nutritional deficiencies, hence supplementation with such compounds as: iron, calcium, vitamin B12, vitamin D, folic acid and probiotics is very important [8].

Changing the diet of patients is usually associated with a large mental, physical and financial burden. Elimination diets are usually very restrictive and must be arranged by clinical dietitians, due to the fact that poorly selected nutrition can contribute to a reduction in the amount of calories consumed, nutrient deficiencies and deterioration of the body's nutritional status. Many people may also not want to accept the elimination of their favorite products and therefore not stick to the recommendations. Arranging such a diet generates additional costs for pharmacological treatment, which may be another burden for patients. Currently, the use of biological treatment gives the best results, but it is associated with the highest costs, just like the use of dietary supplements for deficiencies.

The use of oral or subcutaneous injection drugs and diets is quite well tolerated by many patients and they can continue to perform social, professional and family functions.

Gastrointestinal tract surgery carries much more limitations in performing the current roles. A common problem among cancer patients is the inability to eat food or problems with the excretion of undigested food remnants. The medical team must conduct an assessment of the patient's nutritional status, which includes an assessment of the energy needs and nutrients, such as electrolytes, vitamins, macro and micronutrients. The Nutritional Risk Screening 2022 scale is the recommended tool to assess a patient's nutritional status [15]. Initially, enteral treatment is used, for example, in the form of percutaneous endoscopic gastrostomy (PEG), but if this is not effective, parenteral treatment is used. Parenteral/enteral nutrition improves nutritional status and can save lives, but it also

severely restricts mobility. It affects not only the way patients spend their free time, but also the quality of contact with family and their professional career. A frequently used method of treating diseases of the gastrointestinal tract is the creation of a stoma, which is performed in order to introduce nutrients into the lumen of the gastrointestinal tract or to create an alternative route of fecal drainage. Epidemiological data show that about 8,000 stoma operations are performed annually. Despite the fact that it is an effective method of treatment, it carries many possible complications that patients have to deal with. Common complications include infections, irritation of the skin around the stoma or detachment of the stoma bag. This is a serious problem in everyday functioning and performing physical work or sports activities. Therefore, the key aspect is proper hygiene of the stoma and its surroundings. Taking care, in particular, of the condition of the skin around the stoma, we prevent the development of complications that have worse consequences. The equipment used to supply the stoma is reimbursed by the National Health Fund, but there are limits that cannot be exceeded [8].

Another important aspect that is rarely mentioned is the lack of availability of public toilets or their lack of adaptation for people struggling with diseases related to the digestive tract. People who have a stoma need a hygienic space to change their stoma pouch. Also, patients with Crohn's disease or ulcerative colitis often experience an immediate need to go to the toilet due to diarrhea. Unfortunately, in Poland it is extremely difficult to find a public toilet adapted to the needs of these people.

In the 90s of the twentieth century it was believed that people with disabilities should not work. Currently, due to the aging of societies and the increase in the percentage of citizens with disabilities, the goal is to create conditions for independence in life and employment of people with disabilities.

In Lublin the leading cause of obtaining disability certificates are the diseases of the musculoskeletal system, respiratory tract and cardiovascular system diseases and neurologic health problems [4]. However, gastrointestinal tract diseases are a group of serious health problems that can lead to disability.

Most people, who received a certificate of disability due to diseases of the gastrointestinal tract in Lublin, as our analysis showed, are over 40 years old. A large part of the patients are people of working age (women <60 years old, men <65 years old). Unfortunately, most patients are unable to continue their professional careers due to their health condition or are unable to find employment in sheltered workshops. Patients with gastrointestinal diseases are prone to dehydration and anemia. When they are dehydrated, they feel weak, get tired quickly, have reduced cognitive abilities, may have diseases of the gastrointestinal tract (especially cancer and inflammatory) that cause malabsorption of nutrients including iron, folic acid, vitamin B12 and have a high risk of gastrointestinal bleeding. For this reason, they are unable to perform their work effectively, especially if it is physical work.

CONCLUSIONS

Gastrointestinal tract diseases are in the eighth the place among the causes of disability certificates in Lublin. More effective screening programs are necessary to prevent avoidable disability due to gastrointestinal diseases.

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