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*Assessment of nicotine-dependence and motivation to give up
smoking in patients with arterial hypertension, gastric and duodenal
ulcer disease as well as peripheral atherosclerosis*

Tobacco smoking is one of the most common anti-health attitudes of the modern world. Nicotine belongs to the group of compounds causing psychogenic and pharmacogenic dependence (3). Nicotinism is an important risk factor of many cardiovascular diseases, including ischaemic heart disease, arterial hypertension, peripheral atherosclerosis as well as respiratory, digestive, neoplastic diseases and many others (1, 6, 8, 10). Despite the demonstrated pathogenic effects of tobacco smoke, about 10 mln Poles smoke and this number is increasing. In the 50's of the last century, the smoking habit was particularly common in men. At present, it is equally common in women and young people. Children start smoking at the age of 10–12 (7). Since the mid-70's of the 20th century Poland is among the countries with the highest cigarette consumption worldwide. Each year about 70,000 smokers (aged 35–69) die of tobacco-related diseases (12).

The aim of the study was to assess the level of nicotine-dependence and to analyse the factors which motivate giving up the smoking habit in patients with peripheral atherosclerosis, arterial hypertension as well as gastric and duodenal ulcers.

MATERIAL AND METHODS

The study included 120 individuals: 30 smokers with arterial hypertension (AH), 30 smokers with gastric and duodenal ulcer disease (UD) hospitalized in the Chair and Clinic of Internal Diseases, Medical University of Lublin and 30 patients with peripheral atherosclerosis (PA) hospitalized in the Department of Vascular Surgery, Teaching Hospital no. 4 in Lublin. The control group consisted of 30 healthy smokers (HP). The mean age of the examined patients was 49.5. The study involved smokers and ex-smokers who gave up smoking during the last 3 months already after the diagnosis of their diseases. The study was conducted using our own questionnaire designed for smokers, Karl Fagerstrom Nicotine-Dependence Questionnaire and Nina Schneider test of motivation to give up smoking (4).

RESULTS

The examined group included 79 men (66%) and 41 women (34%). Ninety-one patients (76%) lived in towns, only 29 (24%) in the country. The majority of smokers had secondary –54 (45%) and higher education – 50 (42%). Only 16 (13%) smokers had elementary education; 40 individuals (33%) were employed – the majority of them were mental workers – 59 (50%). The percentage of patients smoking continuously for more than 20 years was: 50% of AH, 37% of UD and 93% of PA patients (Fig. 1). More than 40 cigarettes a day were smoked by 17% of AH, 10% of UD patients and 3% of healthy individuals (Fig. 2).

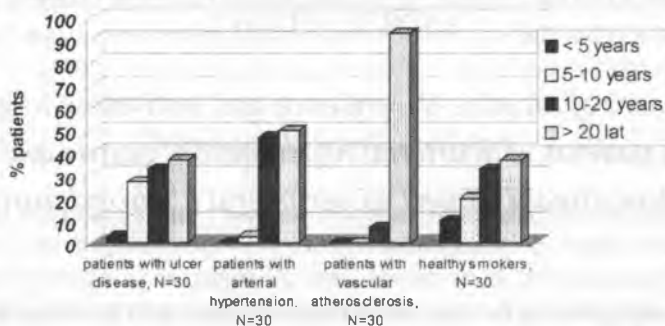


Fig. 1. Duration of smoking habit in the groups with ulcer disease (UD) N=30, arterial hypertension (AH) N=30, peripheral atherosclerosis (PA) N=30 and in healthy patients (HP) N=30

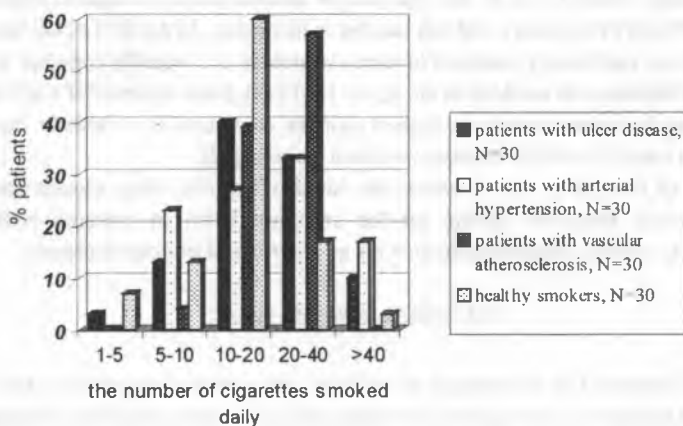


Fig. 2. Number of cigarettes smoked a day in the groups with ulcer disease (UD) N=30, arterial hypertension (AH) N=30, peripheral atherosclerosis (PA) N=30 and in healthy patients (HP) N=30

Over 83% (100) of the examined patients know the effects of smoking. These effects are ignored by 15 (53%) healthy smokers, 14 (47%) UD patients, 12 (40%) AH and 3 (10%) PA smokers. The examination carried out using the Fagerström questionnaire showed high nicotine dependence in 34 (28%) patients. The AH and UD smokers were most addicted (40% of highly addicted); healthy and PA smokers were least addicted (17% and 16% of highly addicted, respectively) (Fig. 3).

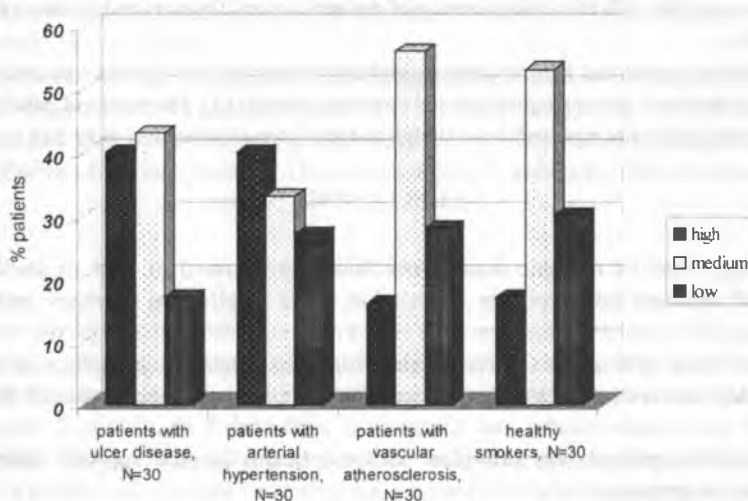


Fig. 3. The level of nicotine dependence (according to the Fagerström test) in the groups with ulcer disease (UD) N=30, arterial hypertension (AH) N=30, peripheral atherosclerosis (PA) N=30 and in healthy patients (HP) N=30

The Schneider test results revealed that 87% of the population examined were ready to give up smoking. The giving up attempts were made by 97 (81%) smokers. Such attempts have never been made by 8 (27%) HA, 6 (20%) UD, 5 (17%) healthy smokers and only 4 (13%) PA patients. The mean number of attempts was 3.6. For 16 (64%) healthy and 12 (40%) PA smokers, the main motivation was their own need to give up the habit; in 11 (50%) AH and 10 (42%) UD patients the motivation was related to deterioration of their health condition. Seven (23%) PA smokers and only 1 (3.3%) HA patient yielded under pressure of the closest circle. During the attempts to give up the smoking habit the nicotine-substitutive preparations were used by 10 (33%) UD, 8 (27%) HA, 7 (23%) PA and 6 (20%) healthy smokers. Fear and anxiety on giving up smoking were most common in UD patients (80%). Similar symptoms were rarest in healthy smokers undertaking their fight with the smoking habit (only 20%).

The patients have confirmed that during their giving-up attempts they were supported by their families – 74 (62%), followed by friends – 13 (11%). Only one patient was provided with the health service support.

DISCUSSION

The issue of cigarette smoking and its harmful effects remains relevant and is dealt with in the literature and health prevention programmes. Moreover, nicotine exerts social effects, which are particularly severe in the family, i.e. the smallest unit of the society. Smoking parents adversely influence their children who start smoking when they are very young. In this way negative health habits are formed and continued in the adult life (2).

The comparison of our results with the study by Jabłońska et al. carried out at cardiological wards showed that our population included smaller number of patients with elementary education (13%) and a significantly larger group with secondary and higher education (5). Our results stress the

relation between UD, AH, PA vs the duration of the habit (over 20 years) and number of cigarettes smoked daily.

The findings reveal that high nicotine-dependence is rarer in PA patients compared to patients with chronic obstructive pulmonary disease and bronchial asthma (11). The results of patients with PA are comparable with those reported in the study conducted at pulmonary wards by Rak et al. (9).

CONCLUSIONS

1. A high level of nicotine dependence was demonstrated in 28% of smokers. The majority of smokers had secondary education, were intellectual workers and lived in towns.

2. The main motivation to give up smoking among healthy smokers was their own need. The key motivating factor in smokers with diseases was deterioration of their health condition.

3. Only one patient was provided with the health service support, nobody used antinicotine programmes.

4. There are no constructive solutions concerning the fight with the nicotine habit. Therefore this issue should be taken up by health service workers and those dealing with the health care in Poland.

5. Our results are promising and indicate the need of further studies in larger populations of smoking patients.

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SUMMARY

For many years tobacco smoking has been known as an anti-healthy element affecting the human organism. Numerous epidemiological studies have shown the relationship between tobacco smoking and various diseases, including cardiovascular diseases, pulmonary diseases, and gastrointestinal tract diseases. Nowadays, in Poland there is about 9.5 mln tobacco smokers and this amount systematically increases especially among women and young people, even children. Tobacco smoking is a psychogenic and social addiction that is related with behavior patterns, social and health attitude. Most smokers want to quit smoking, but only 1/3 of them are successful. The aim of the study was to evaluate the level of nicotine addiction in patients with arterial hypertension, chronic gastric/duodenal ulcer disease and peripheral vascular atherosclerosis, and to estimate some factors motivating to smoking cessation. The study group comprised 120 subjects (mean values of age was 49.5 yrs) – 30 subjects with arterial hypertension, 30 subjects with chronic gastric/duodenal ulcer disease hospitalized in the Department of Internal Medicine, Medical University of Lublin and 30 subjects with lower limb atherosclerosis hospitalized in the Department of Vascular Surgery SPSK-4 in Lublin. Control group was 30 healthy smokers. The examination was performed basing on our questionnaire designed for patients, the Karl Fagerström nicotine-addiction questionnaire and Nina Schneider motivation test. Basing on the results obtained from the Fagerström test, 40% patients with arterial hypertension, 40% patients with chronic gastric/duodenal ulcer disease and 16% patients with vascular atherosclerosis and 17% healthy smokers reached the high level of addiction. The moderate level of addiction had 33% patients with arterial hypertension, 43% patients with chronic gastric/duodenal ulcer disease and 56% patients with peripheral vascular atherosclerosis and 53% healthy smokers. The low level of addiction had 27% patients with arterial hypertension, 17% patients with chronic gastric/duodenal ulcer disease and 28% patients with peripheral vascular atherosclerosis and 30% healthy smokers. Basing on the results obtained from the Nina Schneider motivation test we found that 87% were strongly motivated to stop smoking. On the basis of the results, we characterized the factors motivating to smoking cessation, including patient's own initiative and, health state deterioration. During an attempt at smoking cessation, patients received the greatest support from their families, their friends and acquaintances. Only one patient received help from health service.

Ocena poziomu uzależnienia od nikotyny i motywacja do zaprzestania palenia tytoniu
chorych z nadciśnieniem tętniczym, chorobą wrzodową żołądka i dwunastnicy
oraz miażdżycą naczyń obwodowych

Od dawna znany jest szkodliwy wpływ palenia tytoniu na organizm człowieka. Liczne badania epidemiologiczne wykazały istnienie związku przyczynowego pomiędzy paleniem tytoniu a występowaniem chorób układu sercowo-naczyniowego, układu oddechowego oraz przewodu pokarmowego. Ocenia się, że w Polsce pali około 9,5 mln osób i liczba palaczy systematycznie

wzrasta, zwłaszcza wśród kobiet i osób młodych, a nawet dzieci. Nikotyna jest substancją silnie uzależniającą biologicznie, psychologicznie i społecznie, dlatego uzależnienie od nikotyny zaliczono do grupy zaburzeń psychicznych i zaburzeń zachowania. Wielu palaczy podejmuje próby zerwania z nałogiem, ale tylko 1/3 udaje się trwale zaprzestać palenia. Celem przeprowadzonych badań była ocena poziomu uzależnienia od nikotyny, a także analiza czynników motywujących do zerwania z nałogiem palenia u chorych z nadciśnieniem tętniczym, chorobą wrzodową żołądka i dwunastnicy oraz miażdżycą naczyń obwodowych. Badaniami objęto 120 osób (śr. wieku 49,5 lat) – 30 osób palących z nadciśnieniem tętniczym, 30 osób palących z chorobą wrzodową żołądka i dwunastnicy i 30 z miażdżycą naczyń obwodowych, hospitalizowanych w Katedrze i Klinice Chorób Wewnętrznych AM w Lublinie oraz w Oddziale Chirurgii Naczyń SPSK-4 w Lublinie. Grupę kontrolną stanowiło 30 zdrowych osób palących papierosy. Badania przeprowadzono przy pomocy Ankiety własnej konstrukcji, Kwestionariusza uzależnienia od nikotyny Karla Fagerströma oraz Testu motywacji do zaprzestania palenia tytoniu Niny Schneider. Otrzymane wyniki pozwoliły na stwierdzenie wysokiego poziomu uzależnienia od nikotyny u 40% chorych z nadciśnieniem tętniczym, u 40% chorych z chorobą wrzodową żołądka i dwunastnicy, u 16% chorych z miażdżycą naczyń obwodowych i 17% zdrowych palaczy. Średni stopień uzależnienia występował u 33% osób z nadciśnieniem tętniczym, 43% z chorobą wrzodową, 56% z miażdżycą naczyń obwodowych oraz 53% zdrowych. Niski stopień uzależnienia występował u 27% z nadciśnieniem tętniczym, 17% z chorobą wrzodową, 28% z miażdżycą naczyń obwodowych oraz 30% zdrowych. Aż 87% pacjentów miało motywację do zaprzestania palenia. Głównymi czynnikami motywacyjnymi do zerwania z nałogiem palenia była własna potrzeba zaprzestania palenia i pogorszenie stanu zdrowia. Największe wsparcie przy próbie zerwania z nałogiem chorzy otrzymali od rodziny i najbliższego otoczenia. Natomiast tylko jeden pacjent otrzymał wsparcie ze strony służby zdrowia.