Smoking and endocrine disorders

Patients suffering from endocrine disorders, which affect the function of central nervous system, need a special care and approach in the process of smoking cessation. The process of informing about negative effects of smoking addiction, including potential aggravation of the disease, has to be specially tailored to the need of the patient and the type of the disease. The informing physician should also serve as a model by not smoking and try to confirm the patient about positive benefits of quitting smoking.

Nicotine was found as a substance causing stimulation and sedation of the central nervous system, but it should be remembered that the effect of smoking on many organs of the body in majority is destructive. For instance the role of smoking in endocrine diseases is undoubted and confirmed on many researches. Clinical implications may concern all of the endocrine glands: pituitary, thyroid, adrenal, testicular and ovarian. Cigarette smoking is a risk factor for development of thyroid hormone abnormalities including Graves’ disease and Graves’ ophthalmopathy [1,11]. It was also found that the response to treatment in smoking patients is delayed and diminished [4]. There were suggestions that also in Hashimoto’s thyroiditis smoking might contribute to the increase of hypothyroidism [6]. Also small goiters are more common in heavy smokers. But in contrast it has been already proven, that cigarette smoking is negatively associated with thyroid cancer [10]. Inhibited secretion of pituitary hormones is stimulated in chronic smokers [2]. Smoking females have a shorter period of lactation due to the lower prolactin levels and elevated FSH concentrations in perimenopause [3]. The symptoms of menopause such as hot flushes also are experienced more frequently among smoking women [15]. Nicotine has evidenced effects on the reproductive potential, the level of vasopressin, ACTH, GH and cortisol secretion [14]. Smoking is determined as a risk factor for osteoporosis and susceptibility for fractures. It appeared that nicotine not only results in reduction in bone mineral density, but even counteracts the protective effect of oral HRT on bone. Smoking affects insulin resistance, calcium metabolism and all metabolism especially in young adults [5]. Even passive smoking could affect the growth of young children through decrease in production of GH [16].

According to the results of listed studies, giving up smoking shouldn’t be overestimated for all those patients, although it still seems to be difficult to achieve. Both smoking and hormonal disorders stimulate central nervous system and both are difficult to manage without patients’ active engagement and participation. Health related benefits are perceived as useful motivators for smokers when giving up. The tasks for physicians are motivating patients for attempting to quit and helping them to stop once they try. According to some authors brief, many times repeated advice, including a clear request to quit, reinforcing personal risks of smoking increases quitting rates [9]. Additional elements of the advice include presenting different solutions of management with barriers of quitting and the offer of treatment with both medications and counseling. The psychosocial, behavioural and supportive therapies are also proposed as effective as medications. They are based on individual counseling, group, and telephone formats. The problem with endocrine patients is that they are perceived as problematic in cooperation, persistency and self-control. Many of them are able for “self-cure”, but also many are unable to improve without treatment and long-time support. These seems the main reasons why even those with ophthalmopathy, in which smoking is reported as an aggravating factor of their condition, do not quit smoking so easily and most requests to stop smoking may appear to have little effect. It should be noticed that some people are born with a predisposition for cigarette addiction and it seems to explain why quitting for some is practically impossible. There are personality traits related to cigarette dependency and smoking cessation difficulties. People with aggressive personalities react on nicotine smoking cessation difficulties. People with aggressive personalities react on nicotine
tions, thinking and planning. Many smokers identify their psychological barriers of quitting smoking, which include potentially increased risk of weight gain, interference with social relationships and problems with handling stress.

Our long time observations, experience and results of psychometric explorations on patients with hormonal disorders indicated their emotional and cognitive problems which should be also percept as a significant barrier for cessation. Depressive symptoms and anxiety noticed almost in all of them may result in cognitive impairment (destroyed attention, memory, learning), decreased motivation and perseverance. Depressiveness is involved in great tension, destroyed emotional control and strong need to improve the psychical comfort. The expectation, that patients with those negative psychological conditions will easily quite smoking, seems to be quite unrealistic, all the more as cigarettes are thought to decrease the unpleasant feelings. The stable, innate personality characteristics of endocrine patients also do not predispose them for successful coping with stress. High anxiety traits, typical sex-role, lower emotional intelligence and problems with internal control make the effective interpretation of medical information and successful stress management difficult. Anxiety was reported as significantly associated with self-control dependent reasons for quitting smoking (intrinsic factors) as well as immediate reinforcement and social influence reasons for quitting (extrinsic factors) [8]. It must be noticed that even valuable psychological traits might become a barrier for cooperation with physician. According to Frederick Gibbons [7], “people with high self-esteem have difficulty admitting that their behavior has been unhealthy and unwise, and sometimes that difficulty can have a negative effect on their health.”

Though information about negative consequences of using nicotine seems available for everyone, the more important question is how to achieve the discontinuation of smoking and its benefits. The other significant problem concerns the effective transfer of information between physician and patient, involving active motivating smokers to quit. Not seldom happens that informers are smokers thus the problem concerns both sides. It is proved, that the impact of hidden information in communication is more perpetrate than the open. The real motivation of Health Care Workers (HCW) or their problems with quitting smoking should be treated as one of the main barriers in patient’s therapy. They may serve as role models by not smoking [13]. The smoker’s motivation seems to be the effect of their believe in beneficial health effects, but only if they trust the physician. Smoking doctors are less likely to recognize their role as health educators and to counsel smokers about quitting [13]. Smoking by HCWs undermines the message to smokers that quitting is important. Thus, it seems that physician - smokers shouldn’t inform the patient about necessity of smoke quitting and the process of cessation should begin from medical workers. Reducing cigarette smoking prevalence among these workers help them to be useful model for the general population and medical patients. Furthermore, there are evidences that smoking cessation interventions among health care workers can be effective [12].

References