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Irritable Bowel Syndrome Patients Benefit from Treatment with Low Dose of Amitriptyline



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ABSTRACT

The authors present two cases of patients suffering from irritable bowel syndrome that were successfully treated and in a short period of time by antidepressant amitriptyline in low doses (up to 50 mg/day). This treatment is safe, without side effects and improves significantly the quality of patient's life.



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INTRODUCTION

Irritable bowel syndrome (IBS) is a chronic functional bowel disorder characterized by abnormal motility, visceral hypersensitivity and low-grade inflammation that affects about 10 – 25 % of population^{1, 2}. One of the causal factors is presumably disorder of gut-brain in axis³. In addition to dietary practices and targeted gastroenterological therapies, also psychological means and psychopharmaceuticals are eligible interventions^{4,5}. The low-dose of antidepressant amitriptyline appears to be safe and effective drug for patients with top-down IBS with diarrhea. This is in line with recommendation of the Rome Working Team report¹: “Low to modest doses of tricyclic antidepressants provide the most convincing evidence of benefit for treating chronic gastrointestinal pain and painful FGIDs.”

Amitriptyline is an antidepressant from the RUI family (Re-Uptake Inhibitors) known also as tricyclics. It blocks reuptake of two main neurotransmitters: norepinephrine (NE) and serotonin (5-HT), acts as an inhibitor of norepinephrine and dopamine transporters, and operates also as antagonist of H1, M and α 1 receptors. Its analgesic potency (antagonist of substance P) is ensured by opioid receptors⁶.

Case presentation

Here we present two short case reports demonstrating the success in outpatient treatment of patients with low dose amitriptyline.

Case 1, Mr. P.: A 33-year-old healthy man, married, with two children, he works as a vendor, who visits clients and tries to recruit new ones. He drives a car and from his childhood, he gets always upset when traffic is slow. He is a typical A-type, described as outgoing, ambitious, rigidly organized, highly status-conscious, sensitive, impatient, anxious, proactive, and concerned with time management. People with A-type personalities are often highly efficient "workaholics". They push themselves with deadlines and hate both delays and ambivalence.

Recently, he took a mortgage and therefore almost doubled the area of his operations. This put him under considerable pressure, manifested emotionally by a mixture of anxieties that he would fail his daily tasks and anger at those who delay the traffic, and bodily as an increasing discomfort in cardiovascular system, but mainly in the abdomen. In a traffic jam he began to feel an increased urge to stool, he had to comply with this and repeatedly stopped at the gas

station and used the toilet, sometimes in the last minute. In the last month, similar difficulties began to appear at home on weekends, when he got upset. In this situation, he visited our workplace. After check up by an internist, gastroenterologist and several gastroenterological procedures, where no serious pathology was found, he was transferred to the care of a psychiatrist.

Psychiatric therapy began with supportive part, education and ortel. The ortel command was: "I can be angry, I can be scared and I can be calm. I can choose between these options". Also, amitriptyline was added at a dose of 25 mg in the evening, increased to 0-0-50 mg after one week. After two weeks the patient reported an improvement in gastrointestinal complaints and vaning the urge to stool as a significant relief. Supportive psychotherapy and autogenic training once a month were included as a standard part of the comprehensive approach.

Follow-up after 14 months: The patient is asymptomatic, he accomplishes his work duties without problems, he takes 50 mg of amitriptyline daily and we plan to reduce the dose with longer daytime and longer sunlight.

Case 2. Ms. J.: A 48-year old healthy woman, single, tram driver. She was anxious since childhood, very punctual, but without obsessive compulsive disorder symptoms. Difficulties began two years ago with a change in the timetables of trams and the requirement for even greater punctuality. Concerned that she would not arrive on time to the terminal stop emerged along with anxiety discomfort in the gastrointestinal tract, feelings of swirling, flatulence and urgency to stool. With each arrival to the terminal, she was in extreme urgency to stool. Consequently, in fear of debacle, she started to wear diaper panties. In this situation she came to our medical facility.

After check up by an internist, gastroenterologist and gastroenterological exams, where no serious pathology was found, she got supportive psychotherapy, explanation how anxiety influences gastrointestinal regulation and bowel movements together with 50 mg amitriptyline in one evening dose.

Relief of symptoms came within two weeks and after one month she stopped using the diaper panties. Since then, stool has been regular without urgency in tense situations. Due to the need for vigilance in early morning starts (4:00 a.m.), a combination of nortriptyline 25 mg in the morning and amitriptyline 25 mg in the evening was chosen.

Follow-up after 18 months: The patient is fully functional with regular bowel movements once a day without any digestive problems.

DISCUSSION

There are many factors, which can contribute to the emergence and continuation of IBS, some of them are depicted in figure 1. There are also many ways to intervene positively and alleviate patient's discomfort. In addition to personal regimen adjustment requirements, there is also the possibility of pharmacotherapy. As stated in reference No 3: The updated systematic review and meta-analysis has once again demonstrated that antidepressants and psychological therapies appear to be effective treatments for IBS.

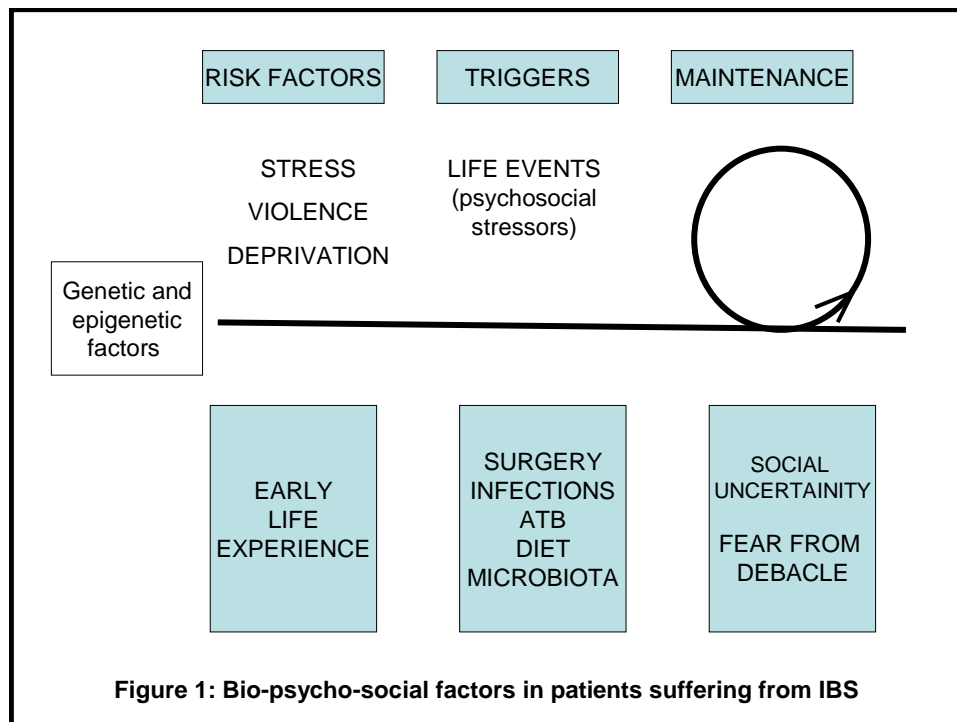


Figure No. 1: Bio-psycho-social factors in patients suffering from IBS

Amitriptyline, with its antidepressant potency, may have a beneficial effect on stress factors, its anticholinergic effect seems to affect motility and its analgesic effects diminish hypersensitivity of the digestive system^{7,8}. In case of undesirable drowsiness, it can be partially replaced by desmethyl derivative nortriptyline.

These two cases helped us to demonstrate that multidisciplinary approach is of benefit, as in all fields of medicine. Having a psychiatrist as a member of gastroenterological team is always a great contribution. Patients get relieved in a shorter period of time without being

unnecessarily examined by gastroenterological techniques, X-ray procedures and many other unpleasant examinations. Also, the risk of patient's stigmatization by alleged aggravation or hypochondria is prevented.

No conflicts of interest

Prague March the 8th, 2020

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