

CONSTIPATION AS THE NURSING PROBLEM - THE DIAGNOSIS AND THE COPING

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Abstract

The authors present the detailed survey of contemporary view on constipation, the origins and diagnostic importance of constipation as a symptom. Functional constipation is elucidated as an independent functional, non-organic, nosology entity, and the disease of gastrointestinal system. The nursing process and nursing interventions regarding constipation are discussed. The importance on physiological based attitude towards constipation as the nursing problem is presented and documented. The survey of pertinent and non-aggressive intervention is given. The health-social interdependencies of constipation and the possible social stigmatisation of constipation's bearers are treated. The need and necessity of more exact diagnosis of constipation, enabled by the use of contemporary diagnostic tools, based on the consensus of experts ("ROME III") are discussed in greater detail. The diagnostic tool "ROME III-Functional Constipation" is attached.

Keywords

Constipation, functional constipation, functional diseases of gastrointestinal system, diet fibre, probiotics, prebiotics, symbiotic, ROME III, nursing process

1 THEORETICAL BACKGROUND

The disease "constipation" is rated to civilization diseases, which is understood as a result of negative impacts of current lifestyle on human. About 30% of the adult population suffer of the constipation. It is perceived or as a single issue or as a symptom of a disease, worsening the patient's course of treatment. It occurs to the failure frequency of defecation. We are talking about nursing problems and we are trying to contribute to solve this problem. Most of people with constipation do not like explain their problem, hate it list and are ashamed to solve it, because the issue touches a patient's intimal parts. It is

necessary to choose a suitable atmosphere for an interview, which is realised in optimal time. It can help nurses to reduce patients assume and to determine right nursing diagnosis. Interview with the sick person and education are prerequisites for a successful treatment of constipation. Even just after arrival of patients in a clinic institution, the nurse is interesting in how the patients used to realise their need for defecation. Nursing staff plays an important role in the constipation prevention and treatment, because spends more time with patients and through their nursing orderly treatment contributes to the improvement of the patient's state and prevent of complications.

Defecation is one of physiological functions of human organism and its basic biological needs in the hierarchy of needs according to Maslow (Huličková, 2008). Regularity in defecation is a predisposition of balance in the body. Habits of the defecation are very individual. For some persons it is normal to defecate twice a day, for another it is daily, for another persons may be normal defecation once every two or three days. Therefore, it is important to take into consideration these individual traits, demands respect for human intimacy, secrecy and shame when emptying. It is important especially sensitive to immobile patients, for whom a shame and respect for intimacy problematic.

Defecation has also psychosocial aspects. When sufficient defecation in humans induces a feeling of pleasure, comfort and relaxation, inadequate meet these needs accompanied by unpleasant psychological and somatic symptoms (Trachtová et al., 1999, Jankovský 2003). During defecation quantity, colour, consistency and odour of faeces are monitored and evaluated (Huličková 2008).

1.1 Definition of constipation

About the constipation as a nursing problem we are talking when there is a fault frequency of defecation. It is about a difficulty during/with defecation of very dry and hard excrements. In the case of difficulty during/with defecation at longer time intervals, usually less than 3 times per week, it is diagnosed the constipation. Constipation occur even an impossibility of spontaneous defecation. In nowadays the constipation is defined as insufficient mange of excrements, hard excrements,

and extra-ordinary obstacles during/with defecation or uncompleted defecation. The constipation may also deliberate suppression of defecation reflex.

For the exact diagnosis of constipation in EU it is used the diagnostic tool “ROME III” (ROME III Guidelines, 2006). The tool is the result of a consensus of authorities in the form of the scoring diagnostic table. As constipation is diagnosed the condition in which it was achieved a score of 2 or more points (see Annex No. 1). Constipation occur acute, chronic or functional forms (Mastiliaková, 1999; Rozsypalová et al., 2002).

1.1.1 Acute constipation

arises from disorders of defecation lasting a few days after the previous faeces emptied on a regular basis. Often it occurs when the environment was changed or the patient's eating habits are changing. After returning of the patient to his normal conditions the patient's defecation mechanisms are adjusted soon. However, it may be a sign of a serious illness (Jirásek, 2003; Vojtišková, 2007).

1.1.2 Chronic constipation

is divided according to the causes constipation as a symptom of another disorder (symptomatic) and constipation as a separate disease (functional).

The symptomatic constipation belong primary, secondary and constipation from psychogenic causes:

- *Primary constipation*, often called “organic constipation” is caused by direct impairment such as colon cancer, inflammatory bowel stenosis, adhesions in the peritoneal cavity, anal fissures in the landscape or at a magnification and dilatation

colon in Hirschsprung's disease (Nečas, et al., 2006).

- *Secondary constipation*

is contingent on metabolic, endocrine disorders, such as hypokalaemia, hypothyroidism, hypoparathyreosis, dehydration, diabetes mellitus and further CNS disorders. Here are the most frequent depression, spinal cord injury, stroke, mental anorexia, multiple sclerosis. Secondary constipation can be caused by a reflex peptic ulcer, urolithiasis and some gynaecological disorders. Sometimes nurse meets in patients with constipation as their result of certain toxins and periodic the use of some drugs. This is particularly the dosage of antidepressants, opiates, antacids, anticholinergics and codeine. Another cause secondary constipation may be pregnant (Staňková, 2006).

- *Constipation from psychogenic causes*

caused as a temporary change in environment, or unsatisfactory conditions for defecation, often when traveling (Vojtíšková, 2007).

- *Functional constipation*

is caused of loss defecation reflex. It is caused of the modern way of life, a sedentary lifestyle, irregular diet with inadequate distribution of various food components, especially fibre. People do not have time to drink, they become be dehydrated and this contributes to the development of constipation. Bowel movement thickens and becomes harder displaceable. *Functional constipation or constipation as a separate disease* is divided into simple constipation, spastic, hypokinetic constipation and

disorders of the mechanics of defecation:

- *Simple constipation*

is often called addictive or habitual. It is defined as difficult or infrequent bowel movements without pain, without other symptoms. It appears feeling of fullness in the abdomen, bloating, indigestion and headaches. It is common in women. It leads to extinction of defecation reflex through suppression of the spontaneous urge to defecate in inappropriate conditions or in high business settings, disallow execution needs (Jirásek, 2003; Jirásek, et al., 2002; Vojtíšková, 2007).

- *Spastic constipation*

is defined of spastic pains and feeling of inadequate emptying. It is characterized by the absence of compulsive defecation. Bowel movement is broken up lumps. Often mucus is present (Jirásek, 2003; Vojtíšková, 2007).

- *Hypokinetic constipation*

“Lanel syndrome” is diagnosed mainly in young women when constipation is similar to the simple constipation. The symptomatology is not exact. Extinction of defecation reflex processes (Jirásek, 2003; Jirásek et al., 2002; Vojtíšková, 2007).

- *Disorders of the mechanics of defecation “obstructive defecation syndrome”*

are characterized of problematic pushing of the bowel movement with preservation of the sense of urgency to defecation. The cause of this disorder may be rectal prolapse, rectocele, pelvic floor muscle disorder or anal stenosis or

hypertrophy of anal sphincter (Jirásek, et al., 2002).

One of the most severe forms of constipation is “paradoxical diarrhoea”. In case of prolonged constipation, the hard faeces “skybala” occurs of the intestine excessive thickening. It then irritates the intestinal mucosa and leads to increased formation of mucus. The mucus leaves with a little bowel movement and thus gives the impression of diarrhoea. The patient complains frequently fruitless urge to defecate and pain in the rectum. Rectum is overcrowded of hard bowel movement, which presses on the intestinal wall. It can lead to decubitus. The most serious complication of the paradoxical diarrhoea is bleeding and perforation of the decubitus in ulcer wall followed intestinal peritonitis. (Mikšová et al., 2006; Richards et al., 2004; Rozsypalová et al. 2002; Trachtová et al., 1999; Petru, 2010).

1.2 Factors affecting defecation process

People are exposed to a number of factors that affect the defecation. These are physiological and environmental factors:

- *Physio-biological factors* include age, diet and fluid intake, physical activity and adequate movement, gastrointestinal diseases, surgical procedures, diagnostic procedures and finally immobility. Age affects the character of the discharge, but especially the control of the defecation processes. In infants and toddlers is emptying a reflective process, in opposite in old age it can observed a reduction or loss of sphincter tone and restrictions the ability of their

conscious control. Sufficient intake of diet rich in fibre and cellulose provides a regular bowel movement. After dietary error or irregular diet the defecation becomes irregular. Hard bowel movement appears in case of insufficient intake of water. In case of overtaking of water physiologically increases fluid output. It is resulting in a loose consistency or watery of the bowel movement. Physical activities and adequate movement regime contribute to the good intestinal peristalsis and thereby to facilitating passage of digest through the colon. Therefore, for prevention of constipation, it is very important appropriate adequate physical regime. Lack of movement affects serious consequences as diseases of the intestine and colon, cancer and infectious diseases, haemorrhoids or anal figures.

- *Socio-cultural factors* present a problem of “taboo”, respect for privacy and intimacy and discretion. For humans presents the defecation intimate and sensitive matter.
- *Psycho-spiritual factors* include personal lifestyle, food habits and physical activity. Further, among these factors include the personality, self-esteem and self-concept and emotional tune. Practicing of regular and smooth emptying is a prerequisite of well-being. Personal qualities also affect peristalsis. Emotionally labile individuals have accelerated peristalsis, what may occur diarrhoea, while in depressive patients often occurs slowing intestinal peristalsis, which leads to

constipation. Negative emotions usually accelerate intestinal peristalsis. (Trachtová et al., 1999; Kozierová et al., 1995; Dylevský, 2000; Jankovský, 2003).

- *Environmental factors* include housing conditions and the level of hygiene. These conditions are affected of the culture of social facilities. Toilets in public areas, their equipment and aesthetic level affect the way the satisfaction of defecation.

2 METHODS, PROCEDURE, DIAGNOSIS OF CONSTIPATION

The basis is a detailed anamnesis. In patients of middle-aged and elderly must be excluded organic cause of the constipation. For the diagnosis of functional constipation we consider as beneficial the next examination:

Physical examination of the abdomen

Physical examination of the abdomen is focusing on problems with emptying, including a look, auscultation, percussion and palpation. Auscultation should precede examination of percussion, percussion because it can affect peristalsis. Examination of the anus is made by inspection and palpation (Mařatka, 1999; Kozierová, et al. 1995).

Defecography

Defecography is a diagnostic procedure in which rectum is fulfilled by contrast agent, which then empties patient under radiological control (Mařatka, 1999).

Irigography

Irigography is more beneficial than endoscopy because better evaluates the shape, position, width, and the length of the colon, wall elasticity and peristaltic waves (Mařatka, 1999).

Rectoscopy

Rectoscopy is performed without preparation because the presence or absence of faeces in the rectum can help to diagnose the type of constipation. If faeces are present, it is a simple constipation; absence of faeces suggests spastic constipation. Rectoscopy sometimes associate with an intestinal biopsy (Mařatka, 1999).

Manometry

Manometry of the anal sphincters is simple and minimally invasive method. Before the examination, the patient empties and his examination is carried out in lying position on the left side with bent knees. The gauge catheter we put into the rectum and leave less time to calm and adaptation. The basic is setting of the idle pressure. To reducing of the idle pressure occurs in old age, more in women and in anal fissures (Mařatka, 1999).

Electromyography

Electromyography (EMG) of anal sphincter and pelvic floor muscles is an additional examination. It has greater importance in the diagnosis and treatment of incontinence. It performs in laboratories performing EMG (Mařatka, 1999).

Functional examination of intestine and colon via radiocontrast capsule

Functional examination of intestine and colon via radiocontrast capsule is less known examination through radiocontrast agents that patients consume during

unchanged dietary regime. Subsequently made plain abdominal images permit detect observation of the shift faeces through the intestine and colon and to diagnose malfunction or anatomical pathology. Congestion of the capsules in rectum is indication for deffecography (Mařatka, 1999).

Laboratory tests

Laboratory tests are performed (outside of the basic tests) serum potassium, sodium, calcium, creatinine and hormones FT4 (free thyroxine) in serum, TSH (Thyreo-stimulatory Hormone) in serum (Jirásek, 2003; Vojtiřková, 2007).

Definite conclusion if the constipation is present or not, is enabled to solve only the diagnostic table ROME III that (ROME III Guidelines, 2006).

3 RESULTS OF THE NURSING PROCESS IN A PATIENT WITH THE DIAGNOSIS OF CONSTIPATION

Nurse tries to provide all its activities in a patient with constipation systematically and in logical links. In this procedure, it helps the nursing process. The process is based on active cooperation of the nurse with the patient. The nurse meets with the diagnosis “Constipation” in patients of all ages in various types of health care.

The process consists of five phases, which are interconnected, periodically repeat and act as one complex:

3.1 First Phase “Examining”

The first phase of the nursing process involves obtaining information (collection of nursing anamnesis) of the patient -

interview with the patient, analysis documentation, physical examination and monitoring, screening, examination.

▪ Interview

Already by arrival in a medical facility the nurse is interesting about patient defecation and the possible symptoms of constipation. Her task is to act tactfully and ensure patient privacy; therefore she should plane about the time and place of interview (Trachtová, 1999). From the patient nurse receives information about his normal defecation habits. She detects the frequency of emptying before the emergence of the constipation problems. She is interesting about bowel movement, its consistency, shape, colour and odour. She also requires information if the patient has a regular defecation time. If the patient suffers of colostomy or ileostomy the nurse must interested in all habits and problems associated with this (Mikřová et al., 2006; Trachtová, 2004). In the event that the patient is suffering long-term of problems with bowel movement, nurse should determine how often these disorders occur, what causes it and what methods the patient uses to solve these unpleasant states.

Another group of questions directed at obtaining information about factors influencing defecation.

It is the age of the patient, as this is one of the major players involved in the excretion of faeces.

Important questions are focused on the drinking habits of the patient. What liquids patient receives per day and what quantity. For the physiological defecation it is necessary to drink at least 1500 - 2000 ml of liquids per day. To the he increasing of fluid intake help some foods with high water content (Farkařová et al., 2006; Frej,

2006; Mikšová et al., 2006; Svačina et al., 2008).

Nurse also analyses what foods are best for the patient, usual his likes and dislikes, food and fluids, and whether the patient eats regularly. Irregular eating a small amount of food is also one of the factors that led to the irregularity of expelling faeces. Also, a diet low caloric intake, especially low intake of fibre and pulp, plays a significant role of constipation. The constipation can be met even when changing the patient's diet (Jirásek, 2003; Svačina et al., 2008).

The nurse asks also about the movement regime the patient. Movement stimulates intestinal peristalsis and has a positive effect on the psyche (Svačina et al., 2008; Trachtová et al., 1999).

During interview the nurse is trying to sense and recognize the patient's emotional well-being and his character. She queries about stress and stressful situations of patient. Fear, anxiety, and invasion of privacy are negative conditions that cause to paleness of intestinal mucosa; intestinal activity slows down, until it stops. May appear sick (nausea) and vomiting. It is proven that to constipation often tend depressed individuals than stable one. Conversely, when wrath of blood rushes to intestinal wall and the intestine becomes spastic. It is necessary to notice the psychological condition of the patient (Mastiliaková, 1999; Trachtová, 1999).

During the interview with patients also we inform about the regular use of medications. Some drugs also significantly affect constipation. An important role in constipation plays regular use of laxatives. Patient increases the dose for the desired effect, but is downregulated natural defecation reflex and subsequently rise to

constipation (Jirásek, 2003; Vojtíšková, 2007).

- *Getting information from the documentation of patient*

To completion of the information about a patient's defecation we are downloading the necessary information from medical records. We are looking for surgery. In healthcare facilities we can meet with constipation after anaesthesia and postoperative especially in the abdominal cavity. It leads to disorders of intestinal motility, which may result in postoperative ileus (Jirásek, 2003).

Women are more prone to the formation of constipation. So we find in documentation for gynaecological anamnesis. We ask about her last gynaecological check. We note that a predisposition to the development of constipation is during pregnancy. Already in the fourth month of pregnancy, there is a gradual weakening of the stomach and intestines. This state is caused by excessive production of the hormone progesterone, which slows bowel activity (Pařízek, 2005).

In medical documentation the nurse collects information also about other diseases. They are mainly endocrinological disease (hypothyroidism, hypoparathyreosis, diabetes mellitus or Addison's disease), which affects intestinal function (Vojtíšková, 2007). In social anamnesis we find social status of the patient, education and employment. It plays an important role in food selection. Very often this selection is limited of financial conditions. These important factors affect personal lifestyle and subsequently the emptying (Jirásek, 2003; Vojtíšková, 2007).

- *Physical examination provided by nurse*

Physical examination is an objective observation of the patient, when nurse tries to get information about the overall appearance of the patient, overall presentation and its physiological functions, esp. muscle strength, skin condition and hygiene of the patient (Nejedlá, 2006).

Important role in patient with constipation plays physical examination of abdomen. Investigation carried out by the nurse. Adult patient lies on supine with slightly bent legs. So we arrange relaxation of the abdominal muscles, necessary for good examination. Abdominal cavity we investigate through inspection, palpation, percussion, auscultation (Nejedlá, 2006; Trachtová, 1999). Because peristalsis may be affected by palpation, we examine the abdomen with a focus on listening GIT first and only then palpation (Trachtová, 1999). For auscultation we use a stethoscope and focus on changes in peristalsis. In constipation state peristalsis instance slow, in listening are present sporadic borborygmuses (Nejedlá, 2006). In palpation nurse must have warm hands and short nails, otherwise contraction reflex in abdominal wall will be a problem. It is good to communicate with the patient and give his attention to other direction. If palpation is painless, we begin to palpate the left hypogastrium and continue to the right, followed by clockwise to the right and down. If the patient indicates pain, we begin to investigate at the site farthest pain.

Palpation can be divided into surface and deep. The surface palpation using only fingertips and deep palpation is provided throughout toes. The nurse performs wave-like movement of either one hand or both hands to each other. She can palpate

resistance of several days' faeces (Nejedlá, 2006; Petru, 2010).

Examination per rectum can be performed only by a physician. For that nurse ensure patient positioning, utilities and privacy during examinations. Before the examining the nurse informs patients about the reason and process of the examination.

- *Track and monitor of faeces*

Monitoring of faeces is as important as the examination of the patient. Amount of faeces is affected by the amount of received food. Under physiological conditions, food contains 10-15% of undigested food particles, mucus 10-15% with epithelia, and 75% of water. Daily defecation presents 100-300 g of faeces (Mikšová et al., 2006; Rokyta et al., 2000).

Nurse regularly records bowel movement frequency in patient's documentation. She also records the composition and the amount of faeces, its form, colour and odour. The colour of faeces is influenced by the type of food intake and medication (Rozsypalová et al., 2002). Besides conventional undigested food in faeces occur pathological impurities such as blood. Admixture of fresh blood (enterorrhagia) indicative of bleeding from the lower part of the colon or rectum. Melaena is black tarry faeces digested blood from the upper parts of GIT, caused by bleeding from the stomach or duodenum. If pathological impurities nurse appears must inform immediately a physician. Physiological odour of faeces is evaluated as putrid. Melaena is typical of sweet smell because faeces contain blood and diarrhoea in some sour odour, as in the intestine predominant fermentation processes (Rozsypalová et al., 2002).

- *Basic screening tests*

Other methods that the nurse uses to diagnose of a patient with constipation are the screening tests. She applies particular nutritional screening, record pain assessment, risk assessment of decubitus according to Norton and Barthel test of basic everyday activities.

Basic nutritional screening evaluates the nutritional status of patients with constipation. The nurse monitors the patient's age, body mass index (BMI), weight reducing due to diet. She is interested how the patient eats, whether suffering from symptoms of the disease, how he manages stress (Kelnarová et al., 2009). Short version of scales used mainly in the elderly is Nottingham screening system. The nurse aims to determine the height and weight of the patient. From the resulting values calculated BMI. Other questions seek to determine the patient's weight loss in the last three months and to reduce food intake in the last month before hospitalization. Important information is the severity of the patient's base disease. If score is 0-2, the patient is in good nutritional status. When score is 5 or more, patient is indicated to examination of nutritional status and to interventions (Topinková, 2010).

Patient with constipation often complains of pain during defecation. Nurse uses "Record pain assessment" to obtain information of nature, location, intensity of pains. Patient assigns his pain intensity on the numbers of 0, which has no pain to the number 10, where the pain is unbearable. Pain intensity helps to identify different types of pain scales (Kelnarová et al., 2009).

Rating according to Norton determines the degree of risk of the patient through a pressure ulcer. Factors that influence the

formation of pressure ulcers, may be related to the emergence of constipation (Mikšová et al. 2006).

Another screening examination is the Barthel test of basic everyday activities. According to this test, the nurse will evaluate the patient's level of self-care and self-sufficiency. Self-sufficiency is important for the patient's way of emptying. Patients without limitation can be emptied in the toilet, because it is able to secure himself all activities associated with defecation. But if patient suffers of any restrictions due to their disease, is also in the emptying partially or wholly dependent on the help of others. That means emptying on portable toilets, bowl, or using the diaper pants. About such patients nurse treated with tact and during defecation ensures them maximum privacy (Jirásek, 2003). All these obtained information nurse carefully records in nursing documentation and based on provides next nursing activities (Petrů, 2010).

3.2 Second Phase "Diagnosis"

If we identify unmet needs or impaired patients with constipation, we make nursing diagnoses. The formation of nursing diagnoses is the responsibility of nurses. The basis for the creation of nursing diagnoses is analytical and systematic approach of nurse focus on objectivity, critical thinking and decision making. Making the nursing diagnoses consists of three parts, namely processing of the first phase of the nursing process, detection of health problems of patient (risks and positives), and the formulation of diagnoses (Jarošová, 2000).

Nursing diagnoses are divided into two groups:

Current problem "Actual diagnoses" - These diagnoses are tripartite (PES – Problem, Aetiology, Symptoms). The "Problem" in patient with constipation is impossibility of regular defecation. "Aetiology" of the constipation is in connection with, for example, with the lack of movement regime of the patient. "Symptoms" of constipation are manifested due reduced frequency of bowel movement, hard faeces, excessive straining during defecation, bloated abdomen, dyspeptic symptoms, headaches and bad moods (Jarošová, 2000 Trachtová, 1999).

Potential problem "Nursing diagnoses" - These diagnoses are from two components (PE - Problem, Aetiology). An example of a potential diagnosis: the risk of congestion in conjunction with surgery in the abdominal cavity. Each nursing diagnosis is formulated according to certain rules taxonomy NANDA II (Tables 1, 2) which is currently the most widely used.

Examples of Particular nursing diagnoses with constipation

(Doenges et al., 2001; Marečková, 2006)

NANDA: 1 - Health Promotion (Health Management)

IP. DG: 00078 - Ineffective treatment regime in connection with a lack of knowledge manifesting in verbalization of the patient, that he does not anything for inclusion treatment regimens to ordinary daily life.

NANDA: 2 - Nutrition (Hydration)

IP. DG: 00027 - Deficit of body fluids in connection with the inability to respond to

the thirst manifested in reduced skin turgor and dryness mucous membranes.

NANDA: 4 - Activity - Rest (Activity - Movement)

IP. DG.: 00085 - Impaired mobility in the context of reduced muscle strength and joint stiffness manifested by a limited ability to perform gross and fine motor skills with limited range of motion.

NANDA: 4 - Activity - Rest (Activity - Movement)

IP. DG: 00110 - Deficit of self-care during emptying in relation with damaged of the ability to shift manifested by an inability to go to the toilet.

NANDA: 12 - Comfort (Physical Comfort)

IP. DG: 00132 - Acute pain in connection with overpopulated intestines manifested in verbalization, facial expressions, and loss of appetite.

Examples of Main nursing diagnoses with constipation – Actual/Potential

Table 1 Example No 1 of an Actual diagnoses (Doenges et al., 2001; Marečková, 2006)

NANDA: 3	Excretion (gastrointestinal system)
Diagnoses	IP. DG: 00011 Constipation in connection with changing of dietary habits manifesting of increased pressure in the abdomen, loss of appetite and strenuous defecation.
Objective:	P/C (patient/client) has restored normal functioning and emptying bowel within 72 hours.
Criteria:	P/C has not a feeling of increased pressure in the stomach within 24 hours. P/C defecates effortlessly within 36 hours. P/C is an appetite until 24 hours.
Interventions:	Motivate P/C to higher physical activity until 2 hours. Serve enema according to the doctor's recommendation. Consult P/C diet with a nutritionist until 4 hours. Secure changes in P/C diet to 6 hours. Provide enough fluids during hospitalization. Record in documentation the fluid intake in 24 hours during the time of hospitalization.
Rating:	Objective was not fulfilled, the diagnosis continues.

Table 2 Example No 2 of an Actual diagnoses (Doenges et al., 2001; Marečková, 2006)

NANDA: 3	Excretion (gastrointestinal system)
Diagnoses	IP. DG: 00012 - Habitual constipation due using of laxatives in connection with incorrect rated frequency of defecation manifesting of excessive use of laxatives and suppositories.
Objective:	P/C found individually suited method emptying within 72 hours.
Criteria:	P/C understood individual differences of defecation within 24 hours. P/C cooperates to find appropriate ways to defecate within 72 hours. P/C does not use laxatives and suppositories to induce defecation every day.
Interventions:	Find out what the patient mean by "normal" functioning of the intestines until 2 hrs. Discuss with P/C physiological state of defecation and its permissible deviations up to 2 hrs. Encourage P/C to activities focussing his attention in another direction to 4 hours. Repeatedly to P/C stress link between diet, exercise and passing defecation during hospitalization. Actively listen and speak with P/C of his anxiety during hospitalization. Educate P/C about the harmful effects of the use laxatives to 2 hours.
Rating:	Objective was not fulfilled, the diagnosis continues.

Table 3 Example No 1 of a Potential diagnoses (Doenges et al., 2001; Marečková, 2006)

NANDA: 3	Excretion (gastrointestinal system)
Diagnoses	IP. DG: 00015 - Risk of constipation in connection with pregnancy.
Objective:	P/C maintains normal functioning of bowel movements during pregnancy.
Criteria:	P/C understands the need for the movement to preserve physiological defecation until 2 hrs. P/C consumes a diet with the right proportion of constituents of food during pregnancy. P/C has ensured adequate fluid intake during pregnancy.
Interventions:	Educate P / K about the importance of dietary fibre to 2 hours. Help P/C to select suitable types of fluids within 2 hours. Secure P/C consultation with the nutritionist to 24 hours. Secure P/C adequate fluid intake during hospitalization. Secure visiting physiotherapist within 24 hours. Activate P/C in the time of hospitalization.
Evaluation:	Moving in the right direction, the objective was fulfilled. Diagnosis was completed.

3.3 Third Phase “Planning”

In the third stage of the nursing process - in planning – we determine nursing strategies and interventions of a patient with constipation. We try about motivation to prevention, and prevent the patient defecation problems.

The initial step in planning is to determine the order of solving problem, depending on the current status of the patient's needs (Jarošová, 2000). In the second stage, the nurse determines the patient goals and resulting criteria. The aim is expected result, leading to regular and painless defecation. Or short-term goals are determined that are relevant for several hours or days of determination, or long-term goals that affect the domestic season and aftercare. It is important, to state the objectives in accordance with the treatment plan of the physician. The objectives are based on nursing diagnoses and are formulated concisely and with time restriction. The criteria are formulated on base of the patient's conclusions to the established nursing process. Nursing interventions determine the activities of nurse necessary for achievement of the patient's objectives. Planned activities may be accessible to the patient safe and compatible with the patient's values and must not undermine the other methods of his healing process (Jarošová, 2000).

3.4 Fourth Phase “Realization”

In the fourth phase the nurse implements nursing procedures and interventions into reality. Nurse through the realization of the activities tries to fulfil the objectives of the patient. In this phase it is important continual monitoring of the patient, if during hospitalization were not

changes in his health state, if the patient is able to defecate, and until which degree he has capability to manage his need. Nurse verifies if the nursing plan, in case of any changes, is still comply. In case of such changes in patient's condition, that the plan does not function, nurse may update nursing interventions (Jarošová, 2000 Workman et al., 2006).

During the implementation of nursing care the nurse collaborates not only with patients but also with other health professionals (doctors, dieticians, physiotherapists). The attitude to the patient is always individual, helpful and empathetic. Nurse is required to react professionally, to observe the patient's intimacy to patient feel not uncomfortable. During the interventions it is necessary to ensure the welfare of the patient and carefully apply the nursing activities (Jarošová, 2000; Workman et al., 2006).

3.5 Fifth Phase “Evaluation”

In this phase the nurse evaluates nursing interventions and determines if patient's objectives were realised. The evaluation is conducted of the nurse (objective) and patient (subjective) continuously throughout the time of hospitalization. Results affect next nursing interventions and activities. If after the evaluation was analysed that the objective was achieved, the nurse may the nursing intervention finish. If the objective was not accomplished, the nurse has to change the nursing intervention. Outcome evaluation of nursing plan records nurse in the nursing documentation and her signature confirms its veracity. The evaluation results obtained nurse due interviews with the patient, which indicate the improvement of the condition and fulfilment of the need. The findings nurse records in the documentation

and plans additional nursing interventions (Doenges et al., 2001; Jarošová, 2000).

4 DISCUSSIONS

Education of patients with constipation is an integral and essential part of the nursing process and workload of nurse. It is a process of health education, where the nurse influences on a patient as teacher or advisor. Patient obtains new information, skills and positive changes in behaviour to ensure a regular bowel movement. In patients with constipation it is primarily health education in healthy lifestyles and non-pharmacological therapy, which lead to health improvement, regular and painless defecation, as well as important information for nursing care and care for their defecation during hospitalization and after, when the patient in home care. Nurse provides the information about nursing care and puts attention on regular checking of patient in the doctor office. Education also relates to the patient's relatives and family. In the education process also other health professionals participate (doctors, dieticians, physiotherapists, psychologists, wellness specialists).

4.1 Non-pharmacological therapy

In patients with a diagnosis of constipation based nurse the care plan mainly on non-pharmacological therapy, which is within its competences. It consists mainly of the diet and lifestyle management. It is desirable to ensure regular varied diet, and increase the proportion of indigestible remnants - dietary fibre. This issue should be discussed with a nutritional/dietary therapist, when nurse ensures the visiting of patients. Nurse is also collaborating with the family,

which can also help significantly to the solution of the problem of constipation. She informs patients about the diet composition, about highlight importance of fibre in the form of root vegetables, fresh, dried or canned fruit.

To the patient it can be recommend apples, pineapple, dried plums and rhubarb, as they significantly involved in modifying defecation. It is advisable to eat fruits and potatoes with the peel. Garlic stimulates the muscle tone of the walls of the intestinal tract. Of the cereals we recommend especially bran, oats, flax seeds. Very suitable are nuts and cold pressed olive oil, which works best in the morning on an empty stomach activity. The constipation and positively affect also products with Bifidobacterium. These include dairy products such as kefir, buttermilk, acidophilus milk and yogurt with live cultures. Nurse leads the patient to regular meals, in a quiet environment and to a thorough chewing of food. Great popularity both for patients and for health professionals reached dietary supplements containing fibre (high fibre diet supplements), probiotics, prebiotics, or even digestive enzymes. Because fibre itself acts very often as a prebiotic, it is actually, in the event of overlapping the presence of probiotics and prebiotics, about a real symbiotic (Petr, 2006). The presence of probiotic microorganisms/tribes is crucial for the beneficial effect (Nevoral, Rada, 2010). It is appropriate if nurse asks the patient's relatives to bring to the patient any of the mentioned supplements (Frej, 2006; Jirásek, 2003; Svačina et al., 2008; Slíva et al., 2008; Vojtíšková, 2007).

Nurse also monitors the daily increase of the fluid intake to at least 2000 ml. This quantity is necessary to maintain a physiologically soft consistency of the

faeces. She encourages the patient to increase the intake of fluids, especially in hot conditions, excessive urination and vomiting. In the case of insufficient fluid replenishment occurs dehydration in the patient. It is desirable that the nurse records in nursing documentation all about the patient's fluid intake throughout the day. During dehydration intestinal contents excessively thickens and consequently influences constipation. Nurse tries to offer to patients drinking of hot drinks in the morning, fruit juices, certain types of laxative mineral waters (Zaječice, Šaratice) and tea with laxative effect (Frej, 2006; Svačina et al., 2008; Slíva et al., 2009).

It is necessary to increase the physical activity of the patient, which leads to mental relaxation, enjoyment of life, and especially to increase the motility of the colon wall. In the therapy of constipation was significantly involved long walk and gymnastic exercises in ambulatory patients. These activities patients should practice twice a day. To the bedridden patients nurse recommends and applies active and passive exercises on the bed in cooperation with the physiotherapist, and performs positioning of the patient and abdominal massages. The nurse can also apply to the patient alternately hot and cold compresses on his stomach. First, accompanied by a towel soaked in hot water, leave for 2 minutes, and then we replace it for 1 minute per towel soaked in cold water. The whole therapy takes 10 - 20 minutes (Komercová et al., 2000).

In patients with constipation it is possible to implement a training of the defecation reflex, which is a necessary part of the treatment. Nurse instructs the patient about this practice and its importance in the treatment of constipation. The base for the reflex creation is practicing reflex at

regular times and in peace. The best are the morning hours, when the patient leaves the bed immediately after the drink water. 20-30 minutes after breakfast would be expected the gastro colic reflex, and during this time the patient attempts on defecation. In the toilet patient states in usual position, in a slight bend with fitted legs on a little stool (Jirásek, 2003).

In the case of paradoxical diarrhoea, the doctor accesses to perform defecation process. Nurse helps doctor to inform the patient about the procedure, ensuring patient privacy, prepares equipment and assist to doctor during the procedure and monitors the status of the patient after surgery. It is important that the nurse monitors the patient after surgery bleeding from the anal area (Mikšová et al., 2006; Rozsypalová et al., 2002).

4.2 Pharmacological therapy

When the non-pharmacological methods of treatment are ineffective, doctor applies combination with pharmacological therapy. Nurse performs role of communicator (Mastiliaková, 2004).

One of the causes of constipation may be imbalance of microflora in the colon. That is why doctors prescribe probiotics and prebiotics, which should harmonize this misbalance. Probiotics contain live bacterial cultures. Prebiotics are non-specifically affecting substrates of microflora in the colon. Drugs positively influencing the gut microflora are in the form of a powder, a suspension, drops, and coated capsules. Some probiotic medication nurse can mixed into food or drink. Other medication nurse must submit an hour after a meal, because this time is the lowest level of digestive acids. By probiotics applications nurse is keeping

instructions of physicians and also the manufacturer's instructions. This method of treatment is one of the non-invasive methods of therapy (Rooster, 2008; Slíva et al., 2009; Zbořil et al., 2005; Nevoral, Rada, 2010).

Very often is possible to apply pharmaceuticals in the form of drops, tablets, solutions or suppositories. Laxatives can be divided by the action into three groups. Bulk laxatives increase bulk of faeces. For people with severe constipation they are not very effective. These include food supplements which are freely sold in pharmacies. Contact laxatives stimulate the large intestine wall to higher activities. They are applied to patients by nurse in the evening. Contact laxatives' effect can be expected in the morning. Their submissions should be approved by a specialist (gastroenterologist). He should also determine the amount of benefit that patient should never exceed. Osmotic laxatives deducted along water and thus soften the faeces (Vojtíšková, 2007).

In the case of spastic constipation nurse applies according to the doctor's recommendation antispasmodics of "papaverin" type, which do not affect the normal intestinal peristalsis. If a patient complains of excessive flatulence, it is served deflatulencia. Nurse must monitor the effect of administered drugs and everything to record in the documentation (Jirásek, 2003). Invasive pharmacological therapy is presented by enema. During constipation may be given disposable cleansing laxative or enema. By cleansing enema nurse injects a greater volume of fluid into the intestine of the patient - 1 to 1.5 liters of liquid. Laxative enema can be applied in the form of micro enema. In this case nurse applied into the intestine, a small amount of fluid assisted of Janet syringe. The task of nurse is to meet the

patient with the performance, to prepare the space and instruments for the performance. It is essential to provide the whole process gently and right professionally. In the event that enema is provided at room, the nurse is responsible to ensure patient's privacy. If the patient is walking, the nurse performs enema in the bathroom. After performing she instructs the patient about the need to maintain the intestinal contents as long as possible. She manages the equipment, monitors and records to document the effect of therapy. Nurse informs the doctor about the benefits of the therapy (Mikšová et al., 2006; Rozsypalová et al., 2002).

Only in serious state of patient, when the patient does not respond to conservative treatment, doctor tends to surgical therapy. Here can be applied the technique of ACE operations. This procedure does not cure the primary cause of constipation, but leads to improving of the quality of life of the patient. It is very gentle appendix-coecostomia, when from outside catheter is introduced into the colon. With this catheter is realised an ante grade infusion, similar to an enema. While traditional enema is retrograde process, it is performed against the natural direction of defecation, the ACE process ante grade, pointing in the direction of natural bowel movements. Finally, it is possible to apply a subtotal colectomy with ileorectal anastomosis. Nurse gives to the patient an increased care in the postoperative period. During the whole hospitalization she is monitoring the wound. She is also caring for the physical and psychological well-being of the patient and educates him (Vos et al., 1996, Zonča et al., 2007).

5 CONCLUSIONS

Constipation, especially functional constipation, represents one of the common problems and adverse health states that are due to their "functional" nature often overlooked. Sometimes the constipation stands outside the focus of interest of medics. But it deals with daunting challenge of their wearers, leading to a reduction in their quality of life and in many cases even to negative socially stigmatizations (Greenbaum, 2006).

It is a task of the nursing field to address this problem and to access to its diagnosis more exactly, using standardized diagnostic tools and to solve it in context of wellness life style in holistic, comprehensive approach.

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