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Case Report / Olgu Sunumu

From Postoperative Ileus to Palliative Care: A Case Report*

Postoperatif İleustan Palyatif Bakıma: Olgu Sunumu

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ABSTRACT

Aim: Postoperative ileus is a common complication that increases the length of hospital stay and causes morbidity and mortality. In this study, palliative care needs of a patient, who had ileus in the late period after abdominal surgery and therefore had a colostomy, are discussed.
Case report: In this 90 years old/male patient, N.Ö., colostomy was opened due to ileus formation in the late period after abdominal surgery. The patient, who was hospitalized in the intensive care unit for 27 days, was followed up at home after discharge. The pressure ulcer that developed in the intensive care unit has become a pressure ulcer that cannot be staged at home. The patient, whose general condition was impaired, was admitted to the palliative care service on 27.07.2022. The patient was admitted to the unit as confused with contractures in his arms and legs, pain, malabsorption, and fluid-electrolyte imbalance. It was determined that he had acidosis and secretion-related respiratory problems. As a result of the applied nursing interventions, oral R 1-2 was started, the pressure ulcer regressed to stage 2, his appetite and oxygen saturation increased, and his pain and secretions decreased. However, no reduction in contractures has been observed and the risks associated with providing/maintaining a safe environment remain.
Inferences: As a result of the care and follow-up given to the patient, it was determined that there was a significant decrease in the symptoms observed when the patient was admitted to the clinic. In the content of the discharge training prepared in line with the nursing care plans to inform the patients and their relatives, it is important to include information about the causes, signs, and symptoms of ileus.

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ÖZET

Amaç: Postoperatif ileus sık görülen, hastane yatış süresini arttıran, morbidite ve mortaliteye neden olan önemli bir komplikasyondur. Bu çalışmada abdominal cerrahi sonrası geç dönemde ileus yaşayan ve bu nedenle kolostomi açılan hastanın palyatif bakım gereksinimi ele alınmıştır.
Olgu Sunumu: 90 yaş/erkek hasta N.Ö'ye abdominal cerrahi sonrası geç dönemde ileus oluşması nedeni ile kolostomi açılmıştır. Yoğun bakımda 27 gün yatırılan hasta taburculuk sonrası evde takip edilmiştir. Yoğun bakımda gelişen basınç yarası evde evrelendirilemeyen basınç yarası haline gelmiştir. Bununla birlikte genel durum bozukluğu da meydana gelen hasta 27.07.2022 tarihinde palyatif bakım servisine yatırılmıştır. Servise konfüze olarak yatırılan hastanın kol ve bacaklarında kontraktür geliştiği, ağrısı olduğu, malabsorbsiyonu, sıvı-elektrolit dengesizliği, asidozu ve sekresyona bağlı solunum problemi yaşadığı belirlenmiştir. Hemşirelik girişimleri sonucunda; oral R 1-2 başlanmış, basınç yarası 2. evreye gerilemiş, iştahı ve oksijen satürasyonu artmış, ağrısı ve sekresyonları azalmıştır. Ancak kontraktürlerinde azalma gözlenmemiş ve güvenli çevreyi sağlama/sürdürme ile ilgili riskleri devam etmektedir.
Çıkarımlar: Hastaya verilen bakım ve izlemlerin sonucunda, hastanın kliniğe yatırıldığında görülen semptomlarında önemli ölçüde azalma olduğu belirlenmiştir. Hasta ve hasta yakınlarını bilgilendirmek amacıyla hemşirelik bakım planları doğrultusunda hazırlanan taburculuk eğitimi içeriğinde; ileusun nedenleri, belirti ve bulgularına yönelik bilgilerin yer alması önemlidir.

* This study was previously presented as an verbal summary presentation at the "1st International Congress of Palliative Care in Nursing" (06-08 October 2022 / Malatya, Türkiye).

1. Introduction

The term ileus is used to describe failure of gastrointestinal peristalsis for both mechanical and non-mechanical causes (1). Ileus can develop after surgery, and it is called "postoperative ileus" (POI) in this case. Postoperative ileus leads to increased patient morbidity, hospital costs, and readmissions and is also labeled as a "public health problem" because of its prevalence (1–4). Factors associated with postoperative ileus include: Chronic lung disease, male gender, smoking history, history of surgery, long operation time, advanced age, and American Society of

Anesthesiologists (ASA) score ≥ 2. In addition, it is considered that the followings may also have an impact on postoperative ileus: preoperative sepsis, total opioid dose, repeated surgery, abdominal incision length, open surgical approach, preoperative low albumin level, peripheral vascular disease, and perioperative transfusion (4,5).

Postoperative ileus may present with many adverse symptoms such as pulmonary aspiration, nausea, vomiting, dehydration, electrolyte imbalance, and sepsis (1). Postoperative ileus, which can be seen after many types of surgery, is also a common condition following abdominal surgery (2–4). Postoperative ileus may develop after abdominal surgery and lasts 3-5 days, but may also manifest as prolonged ileus (6). Prolonged postoperative ileus can be seen after abdominal surgery with a prevalence of 10% to 30% (4). Complications that may develop due to postoperative ileus may necessitate palliative care.

In this case report, the process of a patient who needed palliative care (for 2 years) after abdominal surgery and prolonged postoperative ileus is discussed.

2. Case Report

N.Ö., a 90-year-old male patient hospitalized in the palliative care clinic of M*** training and research hospital, had a history of prostate ca, larynx ca, previous TBC, Cerebrovascular Disease (CVD), and stenting due to abdominal aneurysm 8 years ago. The patient with tracheostomy had a history of Chronic Obstructive Pulmonary Disease (COPD), 40% kidney failure, and hypertension (HT). The patient, who had a colostomy due to ileus, was hospitalized in the tertiary reanimation intensive care unit in the postoperative period and then in the primary surgical intensive care unit. The patient was discharged after 27 days in the intensive care unit and was followed up at home. The pressure sore developed during the intensive care process became a pressure sore that could not be staged during the home care process. While the patient received treatment at home, he also used the senna plant. The patient, whose general condition was impaired, was admitted to the palliative care unit on 27.07.2022.

The patient was confused when he was admitted to the palliative care unit and had contractures in his arms and legs, pain, and nutritional deficiency (numeric rating scale (NRS) score 4). It was determined that the patient, whose Eastern Cooperative Oncology Group (ECOG) performance score was 4, had problems with his breathing due to fluid-electrolyte imbalance, acidosis, and secretion. The patient was fed with Oral R1-2 (formula), O_2 was given by nasal cannula, and his excretion needs were met with a Foley catheter and colostomy. The patient's drug treatments, physical examination findings and laboratory findings are given in Table 1. The patient's system diagnostics findings are given in Table 2.

Table 1. Patient's drug treatments, physical examination findings and laboratory findings

Patient's Treatment	Physical Examination	Laboratory Findings
▪Stomach Protector ▪Mucolytic ▪Anticoagulant ▪Bronchodilator ▪Antidepressant ▪Antibiotic ▪Analgesic ▪Antipyretic ▪Antihypertensive ▪Antibacterial Pomade	**Blood pressure**: 140/90 mmHg **Temperature**: 38 °C or above for the first 3 days **Pulse**: 110 / min **Respiration**: Wheezing, tachypnea (26/min), oxygen saturation below 87%	▪Glucose: 66 mg/dL ▪RBC: 3.07 10^3 ul ▪HGB: 8.7 g/dl ▪HCT: 28,1 % ▪Eosinophil % 7.4 ▪Avg. Erythrocyte Hb. Constant 31.0% ▪Erythrocyte distribution rang 17.9% ▪Protein: 4,3 g/Dl ▪Albumin 1.7 g/Dl ▪Calcium: 6,6 gr ▪Urea: 97.6 mg/dl ▪Creatine: 1.52 mg/dL ▪CRP: 6.64 mg/L ▪ALP: 206 U/L ▪GGT: 133 U/L

*RBC: Red Blood Cell, HGB: Hemoglobin, HCT: Hematocrit, CRP: C-Reactive Protein, ALP: Alkaline Phosphatase, GGT: Gamma-Glutamyl Transferase.

Table 2. System diagnostics findings

System Diagnostics	
Neurological	Confused
Respiratory	COPD and secretion-related breathing problem
Gastrointestinal system	Oral R1-2 assisted feeding, colostomy
Excretion	Foley catheter and diaper
Circulation	Hypertensive, risk of circulatory deterioration due to being bedridden
Pain	Flexor response to pain and agitation
Communication	There were communication problems and lack of motivation due to difficulties in speaking, hearing, and seeing.
Daily Living Activities	Immobile; maintained by caregivers and palliative care nurses.

Ethical Considerations

Because the patient was confused, informed consent was obtained from the relatives of the patient.

In this case report, nursing care is presented according to the North American Association of Nursing Diagnostics (NANDA).

2.1. Nursing Diagnosis

2.1.1. Nursing Diagnosis 1: "**Acute Pain**" due to contractures, immobilization, and bedsores.

Field 12. Comfort, Class. 1 Pain "Acute pain", Code: 00132.

Aim: To observe the patient's relief by relieving pain or reducing the pain score.

Nursing Interventions:

- The location, severity (using the pain scale), and nature of the pain should be evaluated.
- Pain should be graded with a scale; factors that reduce and increase pain should be identified.
- Passive movements should be made in cooperation with physiotherapists.
- Patient position should be changed frequently.
- Various non-pharmacological peripheral and cognitive-behavioral techniques should be applied for pain control.
- Nursing interventions for bed sores should be applied; dressings should be applied.
- The patient's need for pain relief should be evaluated; analgesic treatment should be applied according to the physician's request and the results should be evaluated.
- Regular sleep should be attained for the body to relax; sleep should be encouraged.

2.1.2. Nursing Diagnosis 2: "**Ineffective respiratory pattern**" due to COPD and secretion.

Field 3. Elimination and Exchange, Class 4. Respiratory Function "Ineffective respiratory pattern", Code: 00030.

Aim: To enable the patient to breathe effectively and to improve gas exchange in the lungs.

Nursing Interventions:

- By evaluating the respiratory sounds of the patient, respiratory rate, rhythm, depth, and effort should be monitored.
- Appropriate position should be given to reduce breathing difficulties.
- The effect of position on oxygenation should be monitored.
- Frequent position changes should be made.
- Breathing exercises and in-bed exercises should be performed.
- Respiratory secretions of the patient should be monitored and aspiration should be performed as needed.
- Heated and humidified O_2 should be given.
- The effectiveness of oxygen therapy should be monitored by pulse oximetry.
- Passive exercises should be performed by the patient.
- Ordered drugs should be administered.
- Oral care should be given.

2.1.3. Nursing Diagnosis 3*:* "**Undernutrition**" due to the patient's ECOG performance score of 4, confusion, and being old.

Field 2. Nutrition and Metabolism, Class 1. Unbalanced nutrition, "Nutrition less than body requirements", Code:00002.

Aim: To ensure that the patient is fed according to their daily metabolic needs and in accordance with their activity level.

Nursing Interventions:

- With the consultation of a dietitian, the required/sufficient daily calorie requirement of the patient should be determined.
- A diet should be administered appropriate to the patient's medical condition, body mass index (BMI), and age.
- Foods s/he likes should be given at the desired time (R1-2).
- Painful or unpleasant applications should be planned after the meal (not before).
- A position that will prevent aspiration should be used.
- Spice supplements that do not disturb the patient and that do not have an unpleasant taste and smell should be added to foods.
- Foods that are easy to digest should be preferred.
- Acidic foods, spicy foods and foods that cause distension should not be given.
- Food should be served in an appetizing way.
- Food should be served in little portions and at frequent intervals.
- Oral hygiene should be maintained before and after feeding.
- Trainings should be provided on nutrition and care to the relatives of the patients and these should be implemented together.

2.1.4. Nursing Diagnosis 4: Nutritional deficiency, "**Deterioration of tissue integrity**" due to immobilization.

Field 11. Safety/Protection, Class 2. Physical injury "Deterioration of tissue integrity", Code: 00046.

Aim: To heal tissue.

Nursing Interventions:

- Pressure sore should be staged.
- The depth and circumference of the wound should be evaluated.
- Wound area should be cleaned.
- If there is no redness in the surrounding tissues of the wound, massage should be done.
- Patient position should be changed frequently.
- Protein and carbohydrate intake should be provided for positive nitrogen balance.
- Bedding should be kept clean and tight.
- Air mattresses should be used.
- Dressing should be done regularly in accordance with aseptic techniques.
- Relatives of the patients should be informed about wound care.

2.1.5. Nursing Diagnosis 5: "**Impaired physical mobility**" due to COPD and existing contractures.

Field 4. Activity, Class 2. Movement "Impaired* physical *mobility", Code: 00085.

Aim: To reduce and prevent complications related to inactivity by providing passive mobility of the patient in the bed.

Nursing Interventions:

- Security measures should be taken to minimize the possibility of trauma.
- Passive exercises should be performed at least 3-4 times a day; passive exercises should be taught and practiced with patient's relatives.
- Positions should be changed every two hours; the pressure points should be massaged if there is no redness.
- The skin should be kept dry to maintain skin integrity; friction should be avoided when positioning; an air mattress should be used if necessary; diet should be rich in protein and vitamins.
- The physiotherapist should be collaborated.
- Precautions should be taken against complications.
- Regular water consumption should be ensured.
- Condition assessment is made with the patient on a regular basis.

2.1.6. Nursing Diagnosis 6: "**Excess fluid volume**" due to "hypertension, kidney failure, albumin deficiency, nutritional deficiency, advanced age, and immobility".

Field 2. Nutrition, Class 5. Hydration "Liquid volume excess" Code: 00026.

Aim: To detect early signs and symptoms of excessive fluid volume, to prevent complications and to maintain fluid volume balance.

Nursing Interventions:

- Excessive fluid volume signs and symptoms should be evaluated.
- Risk factors that cause fluid volume increase should be monitored and controlled.
- Position should be changed every 2 hours.
- Venous accumulation and venous stasis findings should be evaluated.
- Skin edema should be protected from trauma.
- Data on lung sounds should be evaluated.
- Vascular access should be kept open; if necessary, the patient should be prepared for central venous pressure (CVP) application.
- Body temperature, pulse, blood pressure, and CVP should be monitored according to the physician's request.
- The dietitian should be collaborated to ensure that the patient receives a suitable diet.
- Diuretics should be given according to the physician's request; potential side effects should be monitored (hypopotassemia, hyponatremia, hypomagnesemia).
- The fluid intake and output should be monitored, evaluated, and recorded.
- Daily weight monitoring should be done.
- The patient should be monitored and their vital signs should be followed.

2.1.7. Nursing Diagnosis 7: "**Confusion**" due to COPD, Anemia, Hypocalcemia, renal failure, and advanced age (90).

Field 5. Cognitive/Perceptual, Class 4 Cognitive "Chronic confusion", Code: 00129.

Aim: To maintain the activities of daily living by providing the patient with a therapeutic environment.

Nursing Interventions:

- Place and time orientation should be provided to the patient.
- A single topic should be talked on by using simple sentences with the appropriate tone of voice.
- The patients should be addressed by names, listened carefully to what they say, given importance to what they say, and meaningful expressions should be identified.
- Positive expressions should be used; questions that cannot be answered should not be asked.
- A safe environment should be provided to prevent the risk of falling.
- The patient's daily life activities (such as feeding, excretion, bathing, hygiene) should be continued.
- Sufficient time should be allocated to patients and caregivers and they should be communicated one-by-one and training should be provided on the situation to cope with methods.
- Relatives of patients should be supported to participate in activities of daily living.

2.1.8. Nursing Diagnosis 8: "**Self-care deficiency syndrome**" due to confusion, age, and immobilization.

Field 4. Activity / Rest, Class 5. Self-care "Self-care-deficit syndrome", Code: 00193.

Aim: To ensure the patient's physical or verbal participation by meeting their self-care needs.

Nursing Interventions:

- The patient's culture should be considered while supporting self-care activities.
- Skin integrity of the individual should be monitored daily.
- The patient should be helped to take a comfortable eating position.

- Necessary support and equipment (in-bed) should be provided by the relatives of the patient when s/he needs a toilet or takes a bath,
- Hair bath (2 times a week) and body wiping bath (every day) should be done according to the patient's needs.
- The oral mucosa of the patient should be checked regularly and oral care should be performed.
- The clothes and bedding should be changed according to the needs of the patient.
- Patient participation in the applications should be ensured.

3. Discussion

The etiology of POI is considered to arise from the surgical stress response and is multifactorial. Inflammatory cells get activated and autonomic dysfunction occurs, resulting in the modulation of gastrointestinal hormone activity. Therefore, older patients and patients with comorbidities who have undergone long and difficult open surgeries requiring transfusion or excessive fluid support are at higher risk (7–9). N.Ö. was an elderly and had many comorbidities. He was first diagnosed by the nurse with an "ineffective respiratory pattern" due to limitation of movement and existing comorbidities. Respiratory sounds of the patient were evaluated, appropriate positioning and frequent position changes were made, oxygen therapy was started, saturation was regularly monitored with pulse oximetry, and drug therapy was administered. With the nursing care, the patient's secretions decreased and his saturation increased from 86 to 96.

In nursing care for "self-care deficiency syndrome" that develops due to confusion, old age, and immobilization in the patient while self-care activities were supported, the patient's culture was taken into account, skin integrity was monitored daily, he was helped to take a comfortable position to eat, and support and equipment were provided when he needed to go to the toilet and take a bath. Oral mucosa of the patient was checked, oral care was maintained, and his clothes and bedding were changed according to his needs. Since the patient was confused, his participation in the practices was very limited.

Since gastrointestinal motility is temporarily inhibited in POI, the patient experienced undernutrition (7,9). As a matter of fact, this was an elderly patient who had undergone abdominal surgery. In the nursing care plan, the diagnosis of "under-nutrition" was made and nursing interventions were applied within this context. There was an increase in his appetite and oral R 1-2 was started.

It is known that purpura and the decrease in the thickness of the skin increase the risk of pressure sores in elderly individuals (10). Contractures developed and skin integrity was impaired in the patient due to immobilization, and thus, pressure sores developed, resulting in acute pain. In nursing care, the location, severity (using the pain scale) and characteristics of the pain were evaluated, frequent position changes were made, some non-pharmacological methods were applied, the need for painkillers was evaluated, and analgesic treatment was applied. It was determined that pain decreased in the patient. In addition, pressure sores were treated. Pressure sore was staged, and the depth and circumference of the wound were measured. Pressure ulcers that could not be staged regressed to stage 2 pressure ulcers with the use of air mattress, aseptic dressing, and other interventions.

Depending on the degree of trauma in POI, small bowel motility recovers within a few hours, and gastric and colon motility recovers after a few days. This period may be prolonged if there is hypokalemia, hypoproteinemia or renal failure (9,11). Hypokalemia, hypoproteinemia, and renal failure were also present in the patient, and the condition was consistent with the literature. Postoperative ileus in the patient evolved into prolonged postoperative ileus. He was diagnosed with hypertension, renal failure, decrease in albumin level, and excessive fluid volume due to immobilization and advanced age (as a nursing diagnosis). The patient was repositioned every 2 hours, venous stasis findings were evaluated, he was protected from traumas, lung sounds were monitored frequently, vital signs were followed, CVP was followed, food intake/extraction was followed, and cooperation was established with the dietitian. As a result of the treatment and care, sufficient diuresis was obtained in the patient, electrolyte levels reached normal limits, and excessive fluid volume was eliminated.

With the advancing age, changes occur in body composites. Muscle mass decreases and ligaments lose 50% of their tensile strength. In addition, many problems such as general weakness, decreased mobility, incontinence, insomnia, confusion, and depression can be experienced together in elderly patients. This brings the risk of fall and injury (12–14). The patient was diagnosed with impaired physical mobility and confusion nursing due to some of the listed reasons and various comorbidities. However, despite the nursing interventions, reduction in contractures could not be achieved and the risks related to providing/maintaining a safe environment remained. No change was observed in the patient's state of consciousness. It is thought that this situation may be due to the age of the patient and the side effects of the drugs he used.

4. Conclusion

The effect of patient's age and comorbidities should not be ignored in the picture of prolonged postoperative ileus. In the postoperative period, the symptoms of ileus should be followed closely by the nurses, and adequate training should be given to the patient and their relatives in the discharge plan.

Conflict of Interest: There is no conflict of interest in this study.

Financial Support: No financial support was received in this study.

Ethics Committee Approval: Ethics committee approval is not required for this study. Informed consent was obtained from the patient's relatives. It was explained that the personal information of the patient would not be shared with other people, they were free to participate in the study and they could leave the study at any time.

Authorship Contribution:

HO: Research design, supervision and consultation, literature review, article writing, final checks.

RD: Literature review, article writing, final checks.

NB: Data collection, shape edits.

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