



## CASE REPORT

# Nursing Care of a Patient with Total Abdominal Hysterectomy + Bileteral Salfingooferectiony (TAH+BSO) According to Gordon's Functional Health Patterns Case Report

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### ABSTRACT

Menopause is an important life stage in which women experience physical and psychological changes. Menopause can occur spontaneously in the natural process or surgically. In this process, nurses have important roles in the treatment, care and follow-up of women. The use of models and theories is very important to increase the effectiveness of care and treatment. In this study, a patient who applied to a state hospital and underwent TAH+BSO surgery was followed up for four days in the postoperative period. A care process was created for the patient within the scope of the Gordon Functional Health Patterns Model, and 11 functional care needs were determined. These patterns are health perception-health management pattern, nutritional-metabolic pattern, elimination pattern, activity-exercise pattern, sleep-rest pattern, cognitive perceptual pattern, self-perception-self-concept pattern, role-relationship pattern, sexuality-reproductive pattern, coping-stress tolerance pattern, and belief- value pattern. Within the scope of patterns, nursing diagnoses of pain, fall risk, nausea and vomiting, activity intolerance, fatigue, deterioration in roles and relationships, death anxiety, ineffective coping with stress, deterioration in sexual pattern were made. Verbal and written consent was obtained from the patient for the case report. With this study, it was concluded that Gordon functional health patterns model was useful in the care given to the patient. In this sense, the use of the model in patient care in the fields of gynaecology and oncology will be beneficial in increasing the effectiveness of the nursing care provided.

## Introduction

Menopause is a natural process experienced by women and is defined as the absence of menstruation for at least 12 months as a result of irreversible loss of ovarian function (Polat & Geçici, 2021). Surgical menopause is the removal of the ovaries (oophorectomy) as a result of external intervention. This process causes a rapid cessation of androgen production, resulting in sudden and uncontrolled menopausal symptoms (Comparetto & Borruto, 2023). Even natural menopause is a process in which women may experience some problems due to

some changes in their lives, but especially menopause that develops unexpectedly can be more severe for women (Córdoba Iñesta et al., 2023).

Oophorectomy is the surgical removal of the ovaries and indications for surgery include ovarian cyst, ovarian torsion and ovarian cancer. Ovarian cancer is the most lethal gynaecological cancer. In 2022, it ranks 18th in all cancers in both sexes and 14th in mortality rate (GLOBAL, 2024). Ovarian cancer is the most lethal cancer among gynaecological cancers and it is predicted that the

number of cases will increase further until 2040 (GLOBAL, 2024). The high mortality rate in ovarian cancer can be explained by the fact that it is asymptomatic and diagnosed at an advanced stage (Duman et al., 2023).

In his 1987 study on nursing diagnoses, Gordon created a theory called 'Functional Health Patterns (FHP)' to collect detailed data for nurses and to organise the data (Günay et al., 2021). According to the theory, the FHP nursing process is defined as the sequence of behaviours in a certain period of time. These patterns analyse human health and life process in 11 interrelated sections. These sections are;

1. Health perception and health management pattern,
2. Nutrition and metabolic pattern,
3. Elimination pattern,
4. Activity and exercise pattern,
5. Sleep and rest pattern,
6. Cognitive and perception pattern,
7. Self-perception and self-concept pattern,
8. Role and relationship pattern,
9. Coping and stress tolerance,
10. Sexuality and reproduction pattern,
11. Beliefs and values pattern (Zanotti & Chiffi, 2015;

Karadağ et al., 2017).

Gordon facilitates data collection by systematically analysing individual needs in these 11 functional areas and provides a holistic approach for nursing care. The theory is useful in terms of creating an individualised and holistic nursing care process in the field of women's health (Erbaş & Demirel, 2016). As a result of the case studies of Aksu et al. on urinary incontinence and pelvic organ prolapse, it was found that the model is an effective and useful model because it allows the patient to be evaluated physically, cognitively and socially, offers a holistic nursing approach and standardises care (Aksu et al., 2021). Karpuz et al. concluded that the model could provide guidance in planning nursing care, education and counselling services in their case studies with pelvic relaxation diagnosis (Karpuz et al., 2023).

In this study, a patient who applied to a state hospital and underwent TAH+BSO surgery was followed up for 4 days postoperatively. A care process was created for the patient within the scope of Gordon Functional Health Patterns.

## Case Report

### Introductory information

- Mrs. Z. 36 years old, married, civil servant.
- She has no smoking and alcohol habits.
- She has no chronic disease and has never undergone a surgical operation.
- Her family history includes breast cancer in her aunt.
- Her obstetric history includes 2 pregnancies, 1 normal delivery, 1 abortion.
- Menstruation history includes irregular and painful menstruation and intermittent bleeding (before diagnosis).

## History

Approximately 5 months ago, the patient presented to the gynaecology emergency department with complaints of exacerbated abdominal pain and USG (Ultrasonography) and laboratory tests (Urine+Complete Blood Count + Biochemistry) were performed. USG evaluation revealed left ovarian enlargement and outpatient clinic was recommended for further evaluation. Detailed USG evaluation and CA markers were analysed in the outpatient clinic examination. MRI (Magnetic Resonance Imaging), CT (Computed Tomography) and PET (Positron Emission Tomography) scan were performed for definitive diagnosis due to elevated CA-125 (Canser Antigen-125) value and confirmation of left ovarian enlargement on USG. The patient was diagnosed with ovarian cancer (Stage 1). After 4 cycles of chemotherapy, TAH+BSO was applied and postoperative follow-up was performed in the gynaecology oncology service.

## Laboratory values

Haemoglobin: 9.3 g/dl, Platelet: 210000/mm<sup>3</sup>, Cell Reactive Protein: 5.8 mg/dl, Urea: 336 mg/dl, Creatinine: 0.71 mg/dl, Phosphorus: 3.36 mg/dl. Cancer Antigen 125 (CA-125) value was 61 U/mL at the time of diagnosis and 16 U/mL at the last test.

## Treatment

2\*1 Desefin (IV), 3\*1 Metrosel (IV), 2\*1 Dolantin (IM, LH), 2\*1 Ondansetron (IV), 3\*1 Metoclopramide (IV), 1\*1 Pantoprazole (IV), 3\*1 Diclofenac (IM), 1\*5mg Diazepam (IM, LH), 1000 ml Serum Physiological, 1000 ml Ringer's Lactate, 1000 ml 5% Dextrose.

## Vital values

The vital signs of the patient were closely monitored for the first 6 hours in the postoperative period. The first hour was monitored every 15 minutes, the next two hours every half hour, and then hourly until the sixth hour. After close follow-up, vital signs were monitored 8\*1. During the follow-up period, there was no deviation in the patient's vital signs that would require intervention. The patient's vital values are as follows; Blood Pressure: 110-60/100-60 mmHg, Pulse: 70-75/min, Respiration: 20-22/min, Temperature: 36-36.2 oC, SPO<sub>2</sub>: 95-97 %.

## Incision Care

The incision site remained closed for 24 hours after the operation. During the hospitalisation, the dressing was maintained daily with 1\*1 Povidone iodine solution and changed by covering with a dry and gauze. Signs and symptoms of infection at the incision site (redness, swelling, temperature increase, discharge, etc.) were observed during dressing change. No signs and symptoms of infection were observed at the incision site.

## Infection Prevention

In the nursing care provided to the patient, the healthcare personnel performed nursing interventions

using disposable gloves after providing hand hygiene with hygienic hand washing techniques. Care was provided by using sterile gloves for dressing the incision site of the patient. Antibiotic treatment including 2\*1 Ceftriaxone (IV) and 3\*1 Metronidazole (IV) was administered to the patient for three days in the postoperative period. At the same time, the patient was informed about the recognition of infection symptoms and prevention methods.

## Evaluation of the Patient According to Gordon's Functional Health Patterns Model

### *Health Perception and Management Pattern*

Mrs. Z. stated that she did not feel well and had a lot of pain and her VAS (Visual Analogue Scale) score was determined as 10. The patient described her pain as burning and stinging pain in the abdomen, which increased with position and continued at frequent intervals. Mrs. Z. stated that she had difficulty walking due to her pain and felt very tired. Mrs. Z. has sufficient knowledge about the disease and treatment process and is aware of the process. The postoperative Itaki fall risk score was 11.

### *Nutrition and Metabolic Pattern*

The patient had nausea and vomiting in the postoperative period. The patient stated that her appetite decreased and she lost weight in general due to the process (the patient's weight before diagnosis was 70-72 kg and her current weight was 59 kg). The patient's oral food intake was closed until 6 hours postoperatively. With the onset of bowel movements, oral food intake started as Regimen 1 after the 6th hour. Afterwards, oral intake continued as regimen 2 and regimen 3 and was followed up. The patient stated that she regularly cared for her mouth and teeth and there were no wounds in her mouth. The patient reported daily fluid intake as 2-2.5 liters.

### *Elimination Pattern*

The patient's bowel sounds are 6/minute. The patient's normal bowel habit is once a day. Urinary frequency is five to six times a day. The patient had gas+ on the 1st postoperative day.

### *Activity and Exercise Pattern*

Vital signs were stable and the patient was mobilised at the 6th postoperative hour. During walking, the patient stated that she had a lot of pain and felt tired in general. The patient stated that she did not want to move too much because of the pain due to the incision site in the abdomen. The patient rated her fatigue as 7 out of 10.

### *Sleep and Rest Pattern*

The patient stated that her pain decreased with the treatment and care provided for her pain in the postoperative period and that she slept well and felt rested because she was tired.

### *Cognitive and Perception Pattern*

The patient is conscious. The patient is orientated in time and place. There is no hearing and vision loss.

### *Self-Perception-Self-Concept Pattern*

The patient has clearly stated her feelings and thoughts. She is open to communication. The patient is semi-dependent in activities of daily living on postoperative day 1 and independent on the other days. Her knowledge about her disease is adequate.

### *Role and Relationship Pattern*

The patient who stated that she lived with her nuclear family stated that she could not fulfil her responsibilities related to the disease process in the roles of parent and spouse sufficiently. She stated that her husband provided financial and moral support. She stated that her close environment was very supportive during her treatment and that they helped her with her responsibilities. The patient stated that she wanted to recover more to fulfil her responsibilities towards her child.

### *Coping and Stress Tolerance*

The patient stated that he was informed about the effect of stress on her disease and therefore she tried to stay away from stress. She stated that her family also attached importance to this issue. The patient stated that she occasionally experienced stress due to the diagnosis and treatment process, and in such cases, spending time with her child and turning to spirituality made her feel comfortable. However, in the postoperative follow-up, the patient stated that there was a distress that she could not cope with and that she could not get rid of the thought of what would happen to her child if she died.

### *Sexuality and Reproduction Pattern*

The patient stated that her sexual life was disrupted during the treatment and surgery process and that this situation made her feel guilty towards her husband. The patient also expressed that she was worried that her sexuality would worsen due to surgical menopause.

### *Beliefs and Values Pattern*

Mrs. Z. stated that her spirituality increased during her illness and she spent more time for prayer and worship. In the postoperative period, the patient was frequently observed to pray the rosary (Table 1.1 and Table 1.2).

**Table 1.1.** Nursing diagnoses and interventions of the patient with TAH+BSO surgery

Functional Health Pattern	Nursing Diagnosis	Nursing Outcomes Classification (NOC)	Nursing Interventions (NIC)	Assessment Results
Health perception and management	Acute Pain (Nanda International, 2018).	Pain The patient expresses that the pain is relieved, the VAS score decreases from 10 to 3, and the pain is under control.	Monitoring of vital signs (blood pressure, pulse, respiration, fever). Evaluation of the severity, location, nature, duration, frequency of pain, determination of factors that reduce or increase pain. Use of analgesics - Use of non-pharmacological methods in addition to pharmacological treatment (such as daydreaming, relaxation exercises, hot/cold application, music therapy, acupressure, massage) (Wilkinson & Barcus, 2018; Ackley et al., 2019).	Mrs Z's pain decreased from 10 to 3 and she stated that her pain was relieved
Health perception and management	Fall (Nanda International, 2018).	Risk Reduction of the patient's ITAKI value to 4, Prevention of traumas that may occur in the patient and minimisation of the risk of falling	Assessment of fall risk. Environmental arrangement (lighting of the room, positioning of the furniture was planned to reduce the risk of falling). Not leaving the patient alone in the room and informing the caregivers about this issue. Informing the patient and her relatives about the risk of falling and interventions for this. Creating soft areas around the patient's bed with supports such as pillows and blankets to prevent falling. Taking support in daily life activities.	The patient's Itaki Fall Risk Scale was evaluated as 6 points. It was said that the patient got out of bed and walked with slow steps. The risk of falling continues.
Nutrition and Metabolic Status	Nausea-Vomiting (Nanda International, 2018).	Reducing the patient's nausea and vomiting, ensuring the patient's balanced and adequate nutrition.	Determination of factors that may cause nausea and vomiting. Ventilation of the room where the food is eaten and removal of bad odours. Explaining the importance of fluid intake in order to replace the fluids lost due to vomiting. Suggesting the patient to consume her meals little by little and at frequent intervals. Monitoring her intake. Daily food intake and weight follow-up, and administration of antiemetic medication depending on the physician's request. Training the patient to ensure oral hygiene before and after meals.	It was observed that the patient did not lose weight as a result of the nursing interventions. The patient stated that her nausea and vomiting decreased.
Activity and Exercise Pattern	Fatigue (Nanda International, 2018).	Determining the factors that increase or decrease the patient's fatigue, decreasing the fatigue level from 7 out of 10 to 4, expressing that the fatigue has decreased.	Determination of factors that increase fatigue such as pain and insomnia or decrease fatigue such as rest. Assessment of the patient's level of fatigue together with sleep and diet. Encouraging the patient to drink at least 8 glasses of water a day and informing him/her that he/she should not experience dehydration. Evaluation of emotional factors that may cause fatigue. Explaining the importance of social support resources and evaluating the number and quality of resources. Monitoring of vital signs. Recommending exercises that will relax the patient, such as walking or breathing exercises, and providing information (Wilkinson & Barcus, 2018; Ackley et al., 2019).	-It was observed that the patient's fatigue decreased from 7 to 5. The patient stated that he realised the factors causing her fatigue, avoided them and decreased her fatigue by using energy conservation techniques.

**Table 1.2.** Nursing diagnoses and interventions of the patient with TAH+BSO surgery

Functional Health Pattern	Nursing Diagnosis	Nursing Outcomes Classification (NOC)	Nursing Interventions (NIC)	Assessment Results
Activity and Exercise Pattern	Activity Intolerance (Nanda International, 2018).	Reducing the patient's activity intolerance, providing comfort.	Evaluation of the patient's activity level and rest periods. Assessment of vital signs (blood pressure, respiration, temperature, pulse, oxygen saturation). Identification of factors limiting the patient's activity. Mobilisation of the patient. Assessment of fatigue and pain levels of the patient. Informing the patient about activities that can conserve energy (sitting on a chair while fulfilling needs such as brushing teeth, etc.). Oxygen and analgesic administration according to physician's order.	As a result of the nursing interventions, it was observed that the patient's activity intolerance decreased, the patient's pain decreased with the analgesic given, and accordingly, the patient performed her activities more easily.
Role and Relationship Pattern	Impaired Role and Relationships (Nanda International, 2018).	The patient manages family processes and develops positive relationships within the family.	Encouraging the patient to express her feelings. Ensuring that the patient realises the strengths of her spouse and social support providers by highlighting them. Sharing her discomfort about sharing responsibilities with her spouse and sharing her wishes with her spouse. Increasing the patient's social support. Teaching the mother techniques for coping with stress (such as relaxation, breathing exercises).	The patient stated that she felt relieved to share her feelings with her husband and health personnel, that she and her husband would share their responsibilities and that she felt good.
Coping and Stress Tolerance	Death Anxiety (Nanda International, 2018).	The patient shares her feelings and thoughts, expresses that the fear of death has decreased, knows the methods of coping with stress and applies them in her life.	Sharing the patient's feelings about the fear of death Providing information about methods of coping with stress (exercise, listening to music, massage, daydreaming, showering, etc.). Using therapeutic communication techniques when communicating with the patient. Supporting spiritual practices (praying, praying, etc.) that relax the patient and do not adversely affect physical and mental health. Talking about the patient's life plans for the future and supporting the patient to set goals for the future. Evaluating the patient's social support status, increasing the social support systems by interviewing the family.	The patient stated that he was relieved because he expressed her feelings, but that he occasionally thought about death. The patient continues to have death anxiety.
Coping and Stress Tolerance	Ineffective coping with stress (Nanda International, 2018).	Reducing the factors causing stress in the patient and gaining the ability to cope with the problems experienced	Sharing feelings and thoughts of the patient. Assessment of situations that cause anxiety and interfere with the patient's ability to cope. Supporting the patient to increase their participation in their own treatment and care. Nursing interventions aimed at reducing factors that negatively affect the patient's ability to cope such as fatigue, sleep problems or pain (such as analgesic administration, creating a calm and quiet environment, creating rest periods for the patient) and informing the patient about this. Teaching the patient techniques to cope with stress (breathing exercises, sharing emotions, etc.).	It was observed that the patient relaxed and calmed down. The patient stated that her negative thoughts decreased.
Sexuality and Reproductive Pattern	Disruption in Sexual Pattern (Nanda International, 2018).	The patient expresses satisfaction with her sexual life and develops solutions to the problems he/she experiences.	Encouraging the patient to express their feelings. Determining the factors that negatively affect the patient's sexuality. Informing the patient about the surgical procedure and its effects on sexual life. Answering the patient's questions by eliminating the lack of information. Encouraging the patient to talk to her partner about her concerns about sexuality.	The patient stated that her anxiety about her sexual life decreased, but she continued to worry about the future process.



## Conclusion

In the case study, the patient with first stage ovarian cancer received nursing care within the framework of Gordon's Functional Health Patterns Model. According to the 11 functional areas of Gordon's Functional Health Patterns Model, nursing diagnoses of pain, fall risk, nausea-vomiting, inadequate fluid intake, activity intolerance, fatigue, deterioration in roles and relationships, death anxiety and ineffective coping with stress, deterioration in sexual pattern were made and holistic individualised care was provided.

In general, nursing theories provide to add originality to professional practices, to provide evidence-based care and to guide nursing care. Gordon's Functional Health Patterns Theory is one of these theories and as a result of the study, it was concluded that the use of this theory in the care given to the patient will benefit the patient's physical, emotional and social relief. In this respect, the use of Gordon's Functional Health Patterns Theory in patient care in the fields of gynaecology and oncology is recommended in terms of the benefits and contributions to the patient.

## Declarations

### Acknowledgments

We thank our patient for his support for the study.

### Conflict of Interest

Authors disclose no potential conflicts of interest

### Ethics

The patient and her family were informed about the study and verbal and written informed approval was obtained.

### Informed Consent

The patient was informed about the study and informed consent was obtained from the patient

### Author Contributions

The contributions of the authors to the study were indicated in the journal form and uploaded to the journal system.

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No funding was received for the study.

### Data Availability

The data used to support the findings of this study can be made available upon request to the corresponding author.

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