

**Case Study**

## Nursing Care of the Patient after Breast Conserving Surgery According to Life Model: A Case Study

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### **Abstract**

**Background:** Providing systematic and holistic nursing care to the surgical patient improves patient outcomes and patient satisfaction.

**Aim:** The aim of this case study was to determine the effectiveness of using the Life Model in a patient who had breast conserving surgery.

**Method:** Data were collected according to Roper, Logan and Tierney's Life Model under 12 headings. Nursing care was planned and implemented according to Life Model.

**Results.** Anxiety due to planned surgery, acute pain due to surgical trauma, risk for bleeding, impairment in nutrition: less than body requirements, risk for hypothermia, activity intolerance, social isolation, risk for loneliness, knowledge deficit and fear of dying are the nursing diagnoses determined according to NANDA classification.

**Conclusion:** Roper, Logan and Tierney's Life Model is an effective approach in providing systematic and effective nursing care for the surgical patients.

**Key words:** Roper, Logan and Tierney's Life Model, nursing care and case study

### **Introduction**

Although incidence of breast cancer is increasing every day; with early diagnosis and treatment it is among the curable cancer type among all others. Survival rate for the breast cancer for early diagnosed patients is ten times higher than the patients with late diagnosis (Peng *et al.*, 2016). Thus early detection of breast cancer by using techniques like mammography, clinical examination is important (Provencher *et al.*, 2016). Development in new surgical techniques in breast cancer surgery leads to positive cosmetic outcomes for patient and their satisfaction with their breast increases after new modalities (Eggemann *et al.*, 2013; Lam *et al.*, 2016). According to research done on this topic it has been realized that patients' wellbeing, sexuality and psychological stage has been influenced by breast conserving

surgery(O'Connell *et al.*, 2016). Other studies suggest that breast cancer patient need physiological, psychological help and they also need some support with their body image(Pauwels *et al.*, 2013). Coping mechanisms used by patients also needs to be clarified in order to give effective nursing care(Karadakovan & Eti Aslan, 2014). Patients who receive planned nursing care after being diagnosed with breast cancer have low anxiety levels, duration of their hospitalization decrease and their depression also subsides (Zhou *et al.*, 2015). Holistic nursing approach is an important step in achieving desired nursing care of the patients.

### **The Case**

42 year old woman married and have two children. She reports having colon polyps,

coxartrosis diabetes mellitus (DM), and hypothyroidism. Her treatment for coxartrosis has been postponed by her physician; she goes to regular checkups for colon polyps. She is receiving treatment for hypothyroidism and DM.

She has been diagnosed with invasive ductal carcinoma on her left breast. Breast conserving surgery has been applied after diagnosis along with segmental lymph biopsy. Patients' medical treatment was applied according to physicians' order. She has been using Enthyrox 50mg for hypothyroidism. Her diabetes mellitus (DM) diagnosis was diagnosed during her breast cancer diagnosis. She takes Gluforce (oral antidiabetic medication)1000mg/day for her DM. Her medical treatment is as follows:

- 500ml NaCl %0,9 (2x1,125ml/ hour)
- Refastil 40mg IV (2x1) (to prevent stomach mucosa)
- Perfalgan 10mg 100ml (4x1) (pain medication)
- Tilcotil 20mg (2x1) ( for pain, muscle relaxant)
- Deksalgin 50mg/2ml (2x1) ( pain medication)

- Hibor 3500 IU/ 0,2ml (1x1)(thromboembolic)

Nursing care of the patient was planned and implemented according to Roper, Logan and Tierney's Life Model under 12 headings. These headings are sorted as follows; maintaining a safe environment, communicating, breathing, eating and drinking, eliminating, personal cleansing and dressing, controlling body temperature, mobilizing, working and playing, expressing sexuality, sleeping and dying (Velioglu, 2012).

### **1. Maintaining a Safe Environment**

Patient evaluates her health status as an average; she is not smoking or consuming alcohol. She believes that she had a breast cancer because of being stressful person. She also describes herself as depressive. She is both nearsighted and farsighted and has lazy eye. She feels uncomfortable, strained and anxious before the operation. She has an IV catheter in place for fluid replacement and also has a dressing on her incision site after the operation. Postoperative vital signs and drainage from surgical site were as follows:

<b>2 hours post -op</b>	<b>Post-op 1<sup>st</sup> day</b>	<b>Post op 2<sup>nd</sup> day</b>
BP: 120/60 Temperature: 36,5C Brething:20/min HR:64/min Pain score: 4 Drainage from surgical site: 0 ml	Pain score:2 Drainage from surgical site: 45ml	Pain score:0 Drainage from surgical site:25 ml

**Nursing diagnosis:** Anxiety (due to planned surgery)

**Aim:** Patient should be able to express the feelings of relief

#### **Nursing interventions**

- Talking to a patient in an encouraging manner
- Keeping eye contact during communication with the patient
- Paying attention not to interrupt patient when she is talking

- Encouraging patient to disclose her feelings
- Assessing the methods she competes with anxiety (Watching TV, walking etc...)
- Discussing effective competing methods with patient ( listening to music, relaxing etc)
- Correcting misunderstandings beliefs related to illness

**Nursing diagnosis:** Acute pain due to surgical trauma

**Aim:** Patient's should be comfortable with pain relieving measurers

### Nursing interventions

- Assessing patient's pain in regular intervals (using VAS 0-10)
- Determining factors which reduce or increase pain
- Assessing factors that increase or decrease pain
- Supporting patient during her daily activities
- Using both pharmacological and non-pharmacological pain control methods
- Administering ordered pain killers on time and on sufficient doses
- Reassessing patient's pain after administering pain medications

**Nursing diagnosis:** Risk for bleeding (due to Hibor administration)

**Aim:** Patient should not experiencing bleeding or complications due to bleeding

### Nursing interventions

- Checking vital signs of the patient every two hours
- Checking incision site for bleeding
- Checking patient for signs of hypervolemia (Low BP, sweating,,, etc)
- Checking laboratory results for abnormal results (INR/PT, liver function test results...)
- Support incision site and prevent it from trauma

## 2. Communicating

She speaks slowly and calmly. She doesn't have any problems in communication. However she admits that they do not talk to each other with her husband. Has good relationship with her children.

## 3. Breathing

Her breathing pattern is normal. She does not complain from coughing or pain during breathing. She reports being tired when using stairs.

## 4. Eating & Drinking

She has two main meals a day. She does not eat anything between meals. She likes to drink tea and water during the day (8 cups of tea/day and 2 glasses of water). She admits being stressed for 10 years and complains of being hungry most of the time due to it. Her appetite has been decreased in last month and lost 6 kg. Her weight is 94 kg and Body Mass Index as calculated as 36.7.

**Nursing diagnosis:** Impairment in nutrition: less than body requirements

**Aim:** Patient should get required nutrients daily appropriate for her metabolic needs

### Nursing interventions

- Patient's daily nutritional requirements should be calculated with dietician
- Assessing patient's weight daily
- Discussing daily nutritional habits and importance of nutrition
- Giving mouth care before meals
- Advising patient to eat meals with family members
- Organizing meal environment for meals
- Advising to bring some of the meals from home

## 5. Eliminating

Patient has daily and normal bowel movements. During the last month she describes having loose stools. She does not use any medication for elimination and goes for urination five times /a day.

## 6. Personal Cleansing and Dressing

Patient is being able to perform her daily living activities. She wears comfortable and clean dresses. She is also able to dress herself. Her skin color and temperature looks normal. She does not have any impairment on her skin except incision site.

## 7. Controlling Body Temperature

Patient's body temperature is in normal range. She does not have any shivering or sweating. Her clothing is appropriate for room temperature. Her body temperature is 36.5 °C axillary. She does not use a second blanket.

**Nursing diagnosis:** Risk for hypothermia (due to hypothyroidism)

**Aim:** Patient's body temperature should be in normal range

### Nursing interventions

- Maintaining room temperature in normal range
- Preventing sudden temperature changes in the environment
- Providing extra blanket for the patient
- Supporting patient to stand up early after operation

- Controlling body temperature every two hours
- Watching for hypothermia signs (cool skin, pallor, pale skin and redness)

## 8. Mobilizing

Patient is able to go for shopping and cooking at home. She experiences tiredness and palpitations while using stairs. Her posture is normal and has no deformities in her skeletal system. She does not use any equipment or prosthesis.

**Nursing diagnosis:** Activity intolerance (due to coxartrosis and being overweight)

**Aim:** Patient should be able to use stairs without feeling of tiredness

### Nursing interventions

- Planning daily living activities with patient
- Providing rest periods and increasing them according to patient's tolerance
- Supporting patient in completing her daily activities
- Supporting patient to wear comfortable shoes
- Administering ordered analgesic before activities
- Teaching the patient diaphragmatic breathing exercises
- Supporting the patient to eat well balanced diet

## 9. Working and Playing

Patient is a teacher. She usually reads and watches TV in her free times. She admits not having any close friends and feeling loneliness, does not like being in social groups.

**Nursing diagnosis:** Social isolation

**Aim:** Patient should be able to take place in social groups

### Nursing interventions

- Encouraging the patient to explain being far from social places
- Assessing the patient's previous social activities
- Planning social activities for patient which she may like
- Encouraging the patient to express her feeling related to breast surgery
- Assessing the role of breast surgery on patient's social isolation

**Nursing diagnosis:** Risk for loneliness (due to strict communication and life style)

**Aim:** Patient should be able to express being not lonely anymore

### Nursing interventions

- Assessing the facts that may cause loneliness
- Encouraging patient to express her feeling's related to loneliness
- Providing support mechanisms to combat loneliness (seeing family members, friends...)
- Encouraging patient to take place in different activities whenever she feels lonely
- Evaluating the effects of breast cancer surgery on patient's social activities

## 10. Expressing Sexuality

Patient has had her first period when she was 10. Her period lasts 6 days and at regular intervals. She reports no contraceptive use and does not want to talk about her sexual life. She has never done a BSE before.

**Nursing diagnosis:** Knowledge deficit related to BSE

**Aim:** Patient should be able to perform BSE by herself

### Nursing interventions

- Providing a comfortable environment for patient teaching
- Informing patient related to BSE education
- Giving information using written materials
- Using short and clear sentences during education
- Planning short but effective education for the patient (BSE technique, time, duration etc...)

## 11. Sleeping

Patient goes to sleep at 24.00 each day. Duration of daily sleep is 8 hours and sleeps 2 hours during the day. She wakes up rested in the mornings. She does have any trouble in falling in sleep. She admits having difficulty in sleeping the night before her surgery.

## 12. Dying

She prefers staying away from stress causing factors. She usually prefers walking, watching TV or sleeping to compete with stress. When she

first heard about her illness she denied it and went to different physicians for second opinion. She reports being anxious and afraid from not being able to wake up after general anesthesia. She does not want to take a risk for having reconstructive surgery.

**Nursing diagnosis:** Fear of dying ( due to anesthesia)

**Aim:** Patient should be able to talk about her fear and should be able to relax

### Nursing interventions

- Talking with patient in a comforting manner
- Providing a comfortable environment for the patient
- Evaluating coping strategies used by patient ( both favorable and unfavorable ones)
- Encouraging to share her feelings with nurse
- Supporting both family and family members
- Not using judgmental phrases when talking with patient
- Giving clear information about procedures, treatment and care

### Discussion

Holistic approach to patients with breast cancer diagnosis would help them easily get adapted to treatment process and life after the cancer treatment. In this case study Life Model was adapted in nursing care of the patient with breast conserving surgery. Patients who have breast cancer surgery are under the risk for being anxious before the surgery and they also carry a high risk for depression after surgical treatment(Kocaman Yıldırım *et al.*, 2009).

In this case it has been assessed that patient has anxiety in pre-operative period. According to relevant data her anxiety was linked to her planned surgery. She reported gaining some information from internet regarding her surgical treatment and appears to be lost in data she reached. Although internet contains numerous useful information there is also a great risk for patients to get misinformed about their diseases. The cause of her anxiety was linked to her misinformation and/or lack of information about surgical treatment. She also admits that she is a stressful person, blaming her personality for having cancer. Her perception related to her disease has been influenced by several factors and her current anxiety was a result of lack of information.

According to relevant literature accurate and sufficient information about the disease and treatment choices influence patients' decision on starting their treatment on time, perception and self-efficacy on their health (McMullan, 2006; Chojnacka-Szawłowska *et al.*, 2016).

During postoperative period patients usually experience acute pain due to tissue damage. If the incision site is located close to a mobile location, patients' pain increases notably. It has been proved that patients who have breast surgery experience pain both spontaneously and with movement (Hovind, Bredal and Dihle, 2013). Patients with axillary dissection even experience three times more pain with shoulder movements(Buyukakincak *et al.*, 2014). In this case patient scored her pain as 4 by right after the surgery (post-op 2 hours) and pain reduced to 2 after nursing interventions for pain management. She scored her pain as 2 on first post-operative day and reported no pain on second day post operatively.

Although it has been reported that bleeding is a common complication after breast surgery on breast conserving surgery cases where breast reconstruction do not take place bleeding is not seen as often (Al-Hilli *et al.*, 2015). In this case having breast conserving surgery can't be seen as a risk for bleeding, anti-thrombolytic treatment was thought to be a potential risk for bleeding. For this reason patient was assessed for signs of bleeding; both her surgical site and drainage was checked on regular intervals. During her hospital stay no unexpected bleeding was occurred. However since patient is discharged to home with her drain in place both patient her family members were informed related to signs of bleeding.

The patient reported being overweight and had unhealthy eating habits for ten years. She also reports losing 6 kg weight in last one month; she also reduced the amount of meals she eats. Patient is receiving medical treatment both for hypothyroidism and diabetes. Side effects of medications and reduction the amount of meals consumed each day could be link to her weight loss. Because of coxartrosis patient also experiences pain during her daily activities (walking and climbing etc.) She usually does these activities in short periods. Being overweight and experience of pain prevented her to engage in healthy life style.

According to literature exercising regularly and complying with diet regimen influence body mass index and HgA1c values (Aune *et al.*, 2015; Sönmez *et al.*, 2015).

Patient reports being stressful for almost ten years. At the same time patient is not able to use effective techniques to combat stressful situations. Breast conserving surgery is one of the techniques that reduces sexual problems between partners (Aerts *et al.*, 2014) and also increases patient satisfaction. According to some studies woman who have breast surgery admits that they do not feel like they are women also feel like losing sexual appealing. In this case patient reported having strict communication with her husband and not willing to talk about her relationship with him. These findings could refer to social isolation and also to some problems related to sexual life. Because of this patient was guided to receive professional help to combat with her family life and improve relationship with her husband. Early diagnosis and breast conserving surgery can help patient both physically and psychologically. Being in a risk group and type of the breast cancer (invasive ductal carcinoma) are important facts for the patient which requires close follow ups by physician. Patients who are in risk groups need regular follow up in order to detect breast cancer in early stages (Provencher *et al.*, 2016). Patient was given an education regarding the importance of physical follow ups by physician and breast self-examination. According to some studies knowledge about breast self-examination (BSE) range from 68.5-72.1% however practicing BSE is under 50% (Dundar *et al.*, 2006; Özdemir *et al.*, 2014). Patient listened carefully all the information has given to her. Since it is not easy to determine if she has any problems with practice of the information she had received

It could be important to remind her important topics related to her disease and follow ups. These implementations done by health care team could result with positive outcomes for the patient.

## Conclusion

Roper, Logan and Tierney's Life Model is an effective approach in providing systematic and effective nursing care for the surgical patients.

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