

Application Henderson's Need Theory on a Case of Esophageal Cancer

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Abstract

Cancer is a broad term that refers to the uncontrolled growth of abnormal cells, which can invade or spread to other areas of the body. Cancer encompasses over 150 different types, each presenting unique challenges. Patients with cancer often require specialized healthcare to manage their condition and the treatments involved. This case report discusses a 55-year-old female diagnosed with esophageal cancer, who was admitted for chemotherapy. Throughout her treatment, nursing care was provided using Virginia Henderson's Nursing Need Theory, which emphasizes promoting patient independence and addressing their basic needs. The patient had been experiencing symptoms, such as heartburn, difficulty swallowing, and nausea for several months before her diagnosis. She was undergoing chemotherapy as part of her treatment plan. The application of Henderson's theory allowed the healthcare team to address not only the physical aspects of her condition, such as pain management and nutritional support, but also the emotional and psychological needs, promoting her overall well-being. This holistic approach aims to empower patients and help them regain independence during treatment, ultimately improving their quality of life.

Keywords: Esophageal cancer, chemotherapy, patient independence, cancer treatment, health promotion

INTRODUCTION

The esophagus is a hollow, muscular tube that carries food from the throat to the stomach. Esophageal cancer develops when a malignant tumor forms in the esophageal lining. As the tumor grows, it can invade deeper tissues and muscles of the esophagus, and it can occur anywhere along the tube, including near the gastroesophageal junction. Esophageal cancer is the most aggressive gastrointestinal cancer globally, known for its rapid progression and poor prognosis in most cases. Treatment strategies depend on the disease's stage and may include surgery, radiation therapy, chemotherapy, and supportive care. However, since most patients are diagnosed with metastatic disease, treatment is often palliative. This paper explores the role of nursing care in addressing patients' needs through Virginia Henderson's need theory, focusing on providing comprehensive and holistic care [1-4].

THEORY

Virginia Henderson's Nursing Need Theory highlights the distinctive role of nursing practice by focusing on promoting patient independence to support faster recovery during hospitalization. The theory centers on addressing basic human needs and outlines how nurses can assist in meeting these needs to help patients regain self-sufficiency [5, 6].

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MAJOR CONCEPTS

Individual

Virginia Henderson viewed a patient as a whole person, comprising interconnected physical, psychological, and social needs. She emphasized that every individual has fundamental health needs

and may require support to attain health, independence, or a peaceful death. According to her, achieving wholeness involves maintaining a balance between physiological and emotional well-being [7, 8].

Environment

Henderson noted that creating a supportive environment that promotes health is one of the 14 essential activities she identified for assisting clients.

Health

Health is the balance between all aspects of human life and is defined by the ability to carry out activities independently, as outlined in the 14 components of basic human needs.

NURSING

“The primary role of the nurse is to support individuals, whether ill or healthy, in carrying out activities that promote health or recovery—activities they would do on their own if they had the strength, will, or knowledge. The nurse’s aim is to help the individual achieve independence as quickly as possible. Ultimately, the nurse seeks to make the patient whole or self-sufficient. Nursing tasks are divided into fourteen categories based on human needs [9]. These fourteen components of Henderson’s framework are as follows:

- Breathe normally.
- Eat and drink adequately.
- Eliminate body waste.
- Move and maintain desirable postures.
- Sleep and rest.
- Select suitable clothes and undress.
- Maintain body temperature within normal range by adjusting clothing and modifying the environment.
- Keep the body clean and well-groomed and protect the integument.
- Avoid dangers in the environment and avoid injuring others.
- Communicate with others in expressing emotions, needs, fears, or opinions.
- Worship according to one’s faith.
- Work in such a way that there is a sense of accomplishment.
- Play or participate in various forms of recreation.
- Learn, discover, or satisfy the curiosity that leads to normal development and health and use the available health facilities.

CASE SCENARIO

Mrs. XX is a 55-year-old woman who has been experiencing heartburn (epigastric pain), difficulty swallowing (dysphagia), nausea, and vomiting for the past five months. Two months ago, she was diagnosed with esophageal cancer and was prescribed a total of five cycles of chemotherapy. She completed the first cycle three weeks ago and is now admitted for her second round of treatment.

On assessment, she looked dull, fragile, and emaciated, her vital signs were temperature 98.6F, pulse rate: 94 beats/min, Respiratory rate: 20 breaths/min, and Blood Pressure 100/60. Head-to-toe examination revealed a thin emaciated appearance with a BMI of 15.4, a mild degree of dehydration with dry skin and mucous membrane along with nausea, vomiting, epigastric pain, dysphagia, etc. Nutritional assessment revealed that the client is consuming inadequate calories.

Diagnostic Studies

- CBC with differential – hemoglobin 10.8 mg/dl.
- Serum urea and electrolytes – within normal range.
- Blood sugar – normal.

Imaging Studies

Contrast-enhanced CT thorax and abdomen were done which showed that the carcinoma at the gastroesophageal junction and that the tumor is in contact with the descending aorta.

Medications

- Inj. Dexamethasone 8 mg (Glucocorticoid).
- Inj. Emeset 4 mg (Antiemetic).
- Inj. Cisplatin 25 mg (Antineoplastic).
- Inj. 5-fluorouracil 630 mg (Antimetabolite).

Key Issues Identified

- Anticipatory grieving.
- Epigastric pain.
- Inadequate calorie intake.
- Fatigue.
- Low self-esteem.
- Fear and anxiety.
- Risk for fluid volume deficit.
- Risk for infection.
- Risk for altered oral mucous membrane.
- Risk for impaired family process.

Nursing Diagnosis

- Anticipatory grieving related to loss of physiological well-being as evidenced by the patient's verbalization
- Acute pain (epigastric pain) is related to the disease process as evidenced by the facial mask of pain.
- Altered nutrition; less than body requirements related to dysphagia as evidenced by inadequate intake of food and emaciated appearance.
- Fatigue related to reduced food intake and the effect of chemotherapeutic drugs as evidenced by inability to perform activities of daily living.
- Situational low self-esteem related to diagnosis of cancer and physical appearance as evidenced by expressed feelings of hopelessness.
- Fear and anxiety related to situational crisis as evidenced by apprehension.
- Risk for fluid volume deficit related to nausea and vomiting.
- Risk for infection related to immunosuppression and malnutrition.
- Risk for altered oral mucous membrane related to side effects of chemotherapeutic drugs.
- Risk for altered family process related to situational crisis.

APPLICATION OF CONCEPTUAL MODEL ON CANCER OF ESOPHAGUS

This diagram (Figure 1) demonstrates a holistic approach to managing the care of a client diagnosed with esophageal cancer by focusing on multiple dimensions of care, including physiological, psychological, social, spiritual, hygiene, and safety aspects. The model emphasizes the following key interventions:

Physiological

- Addressing inadequate nutritional intake and fatigue through a modified diet plan, promoting semi-solid food intake, and ensuring sufficient rest.

Psychological

- Supporting anticipatory grieving by encouraging open expression of feelings, simplifying explanations of treatment plans, and ensuring the presence of family members.

Social

- Managing low self-esteem by fostering interaction with family, friends, and healthcare teams.

Safety

- Reducing the risk of infection and injury through aseptic techniques, monitoring for infection signs, maintaining hand hygiene, and creating a safe environment.

Hygiene

- Enhancing cleanliness by changing bed linens, maintaining environmental hygiene, and advising families to provide fresh clothing.

Spiritual

- Offering spiritual support by encouraging guidance from spiritual leaders to provide comfort and strength during treatment.

This model aims to provide comprehensive and compassionate care to address the diverse needs of clients with esophageal cancer, ensuring a better quality of life throughout their care journey.

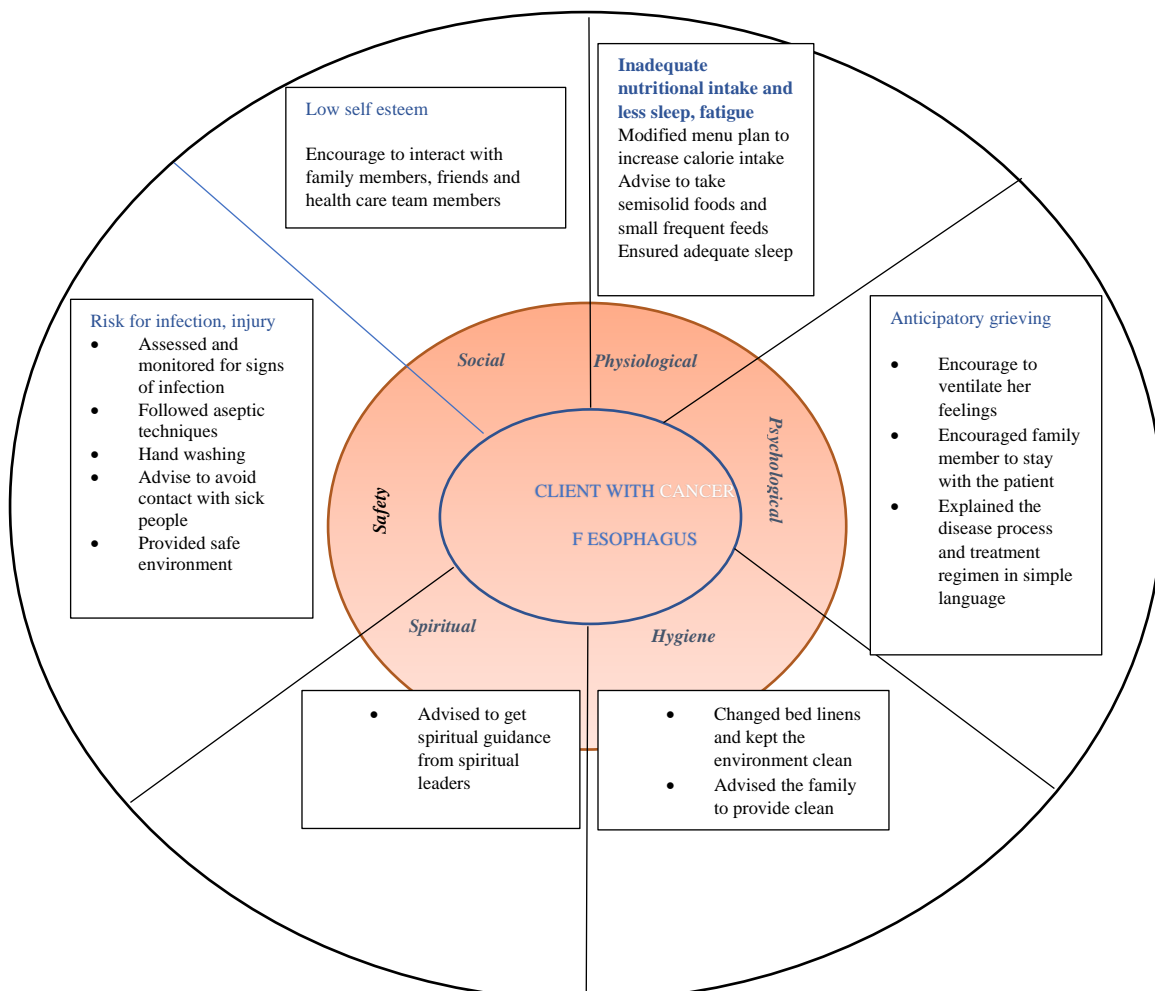


Figure 1. Application of a conceptual model addressing the care of a client with esophageal cancer.

DISCUSSION

Esophageal cancer is considered one of the most aggressive gastrointestinal cancers globally, with poor prognosis. The esophagus is a 25 cm long muscular tube that connects the throat to the stomach,

running from the 7th cervical vertebra to the 11th thoracic vertebra. Its blood supply comes from the thyroid artery and the aorta, while venous drainage occurs through the thyroid and azygos veins. Additionally, the esophagus contains an extensive network of lymphatic vessels in the submucosa, which can promote the spread of cancer cells along its length [10].

Incidence

- Approximately 47000 new cases per year and 42000 deaths per annum.
- 6.5/100,000 population in males and 4.2/100,000 in females.

Types

- *Adenocarcinoma*: This type of cancer begins in the glandular cells at the lower end of the esophagus and is the most common form. It typically develops closer to the stomach. Chronic acid reflux, GERD, and Barrett's esophagus can increase the risk of developing this cancer.
- Squamous cell carcinoma arises from squamous cells in the upper esophagus, commonly associated with heavy alcohol consumption, smoking, and organ transplants

Etiology

Smoking, alcohol, drinking beverages at high temperatures, poor nutrition, a diet low in vegetables and fruits, human papillomavirus infection, H.pylori infection, GERD, Zollinger Ellison syndrome, etc.

Clinical Manifestations

Dysphagia, weight loss, bleeding, epigastric pain, persistent cough, and hoarseness of voice in case of laryngeal involvement

Diagnosis

history and clinical examination, endoscopy, barium swallow, PET scan

Management

Chemotherapy, radiotherapy, targeted therapy, immunotherapy, surgery, and supportive treatment

Nursing Management

Promote nutrition, provide emotional support, minimize the risk of complication

Complications

Esophageal perforation and metastasis to lungs and liver

NEW INSIGHTS GAINED

Esophageal cancer is associated with poor prognosis (only about 20% survive about 5 years) but with early diagnosis (before the onset of symptoms) the survival rate is about 80 to 90%.

- Commonly diagnosed at advanced stage.
- Men get esophageal cancer far more than women.
- People with central obesity are at risk of developing adenocarcinoma.
- Repeated lengthy bouts of hiccups can be a sign of esophageal cancer.
- Drinking overly hot tea or other liquids might lead to esophageal cancer.

Cytosponge

A sponge-on-a-string device used for early detection of esophageal cancer. It consists of a compressed sponge attached to a string, which is contained within a capsule that dissolves in the body. Once swallowed it dissolves and releases the sponge within 8 minutes and it is then pulled out by the attached string, the sponge collects the esophageal cell samples.

NURSING CHALLENGES

- Promoting nutrition – dysphagia, nausea, vomiting.

- Gaining co-operation.

Actions

- Small frequent feeds with energy-dense foods in semisolid form.
- Adequate explanation to the patient and relatives.

Suggestions

- Awareness about early screening
- Healthy lifestyle to prevent such kinds of fatal diseases

CONCLUSIONS

This article firmly establishes the importance of applying theories in nursing care through a case study. The application of nursing theories is essential for the provision of holistic care and for reducing inequalities at every stage of the nursing process.

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