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Managing Pleural Effusions:
Nursing Care of Patients With a Tenckhoff Catheter

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Malignant pleural effusions result from advanced metastatic disease and can have a devastating effect on patients and their families. The insertion of a tunneled pleural catheter, such as a Tenckhoff catheter, is a treatment option for this patient population. Nurses play a significant role during the patient's journey with the disease process, providing the skills necessary to promote self-care and autonomy, resulting in improved quality of life. In this article, the authors discuss the nursing care of patients who have a Tenckhoff catheter.

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Nursing plays a significant role in the management of pleural effusions, supporting patients and their families throughout their journey. A malignant pleural effusion is an accumulation of fluid in the pleural space with malignant cells within it. Although congestive heart failure or infection can cause benign pleural effusions, the most common underlying etiological causes of malignant pleural effusions include carcinoma of the lung, mesothelioma, breast cancer, gastrointestinal tract carcinomas, lymphomas, and ovarian cancer (Brubacher & Holmes Gobel, 2003; Musani, Haas, Seijo, Wilby, & Sterman, 2004). The annual incidence of malignant pleural effusion is 200,000 in the United States (Porcel & Light, 2006). Malignant pleural effusion is a frequent and morbid result of advanced metastatic disease that can cause severe dyspnea, chest tightness, pleuritic pain, and cough. Such symptoms can result in a tremendous amount of emotional distress and anxiety for the patient and their family.

Treatment options for recurrent pleural effusions include repeated thoracentesis, chemical sclerosis/talc pleurodesis, chemotherapy, radiation, and placement of a long-term indwelling pleural catheter, such as Tenckhoff or Pleurx® (Denver Biomedical) catheters (Robinson, Fullerton, Albert, Sorensen, & Johnston, 1994). Multiple factors must be taken into consideration when determining which treatment option is appropriate for patients. According to Shuey and Payne (2005), the treatment considerations include patients' performance status, type of malignancy and its response to previous treatments, and prognosis.

Two membranes, known as the pleura, lie within the chest cavity. The two types are the visceral pleura, which covers the lung, and the parietal pleura, which lines the inner chest wall. The space between these two pleura is known as the pleural space (see Figure 1). Normally 5–20 ml of fluid is present in the pleural space, which acts as a lubricant allowing the two pleura to slide across each other without resistance during respiration (Held-Warmkessel & Schiech, 2008; Pearson et al., 2002; Shuey & Payne, 2005; Taubert, 2001). The fluid is diffused through the parietal pleural capillaries and is reabsorbed through the visceral pleura. A pleural effusion results if more fluid is produced than can be absorbed from the pleural space (Held-Warmkessel & Schiech, 2008). Peritoneal fluid also may accumulate within the pleural space as it leaks through pores in the diaphragm in patients with abdominal ascites (Pearson et al., 2002; Shuey & Payne, 2005). As much as 0.5–1 L of fluid may move through the pleural space in a 24-hour period (Shuey & Payne, 2005; Taubert, 2001).

With the current advances in treatment methodologies with malignant disease, patients, in general, are living longer. However, by the time they develop a malignant pleural effusion, their life expectancy usually is severely limited. The healthcare team's goal should be to work with the patient and their family to try to

At a Glance

- Nurses can play a significant role in assisting patients and their families with the devastating effect of malignant pleural effusions.
- Nurses require advanced educational preparation to safely care for patients with a Tenckhoff catheter.
- The ultimate goal of managing a Tenckhoff catheter is to allow patients autonomy in their care, thereby contributing to improved quality of life.

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