Online Exclusive Article

Sensory Perceptions of Patients With Cancer Undergoing Surgical Insertion of a Totally Implantable Venous Access Device: A Qualitative, Exploratory Study

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Purpose/Objectives: To investigate sensory perceptions of patients who underwent insertion of a totally implantable venous access device (TIVAD) under local anesthesia.

Research Approach: Qualitative, exploratory study.

Setting: Tertiary care center in Belgium.

Participants: 20 adult patients with cancer or hematologic disease undergoing a first-time TIVAD insertion.

Methodologic Approach: Immediately after insertion, patients were asked to describe their sensory perceptions during each of four phases. Descriptions were documented in a sensory information grid (SIG) that was composed of a row and column matrix of entries for the four phases of the procedure and the five sensory modalities. Verbatim descriptions of patients were assigned labels using a descriptive coding process.

Main Research Variables: Sensory perceptions in the modalities of hearing, sight, touch, smell, and taste.

Findings: Patients experienced many sensory perceptions that mainly occurred during preparation of the patients and surgical equipment (phase 2) and during the actual TIVAD insertion (phase 3). Patients perceived fewer olfactory sensations. No taste perceptions were mentioned.

Conclusions: Patients reported numerous sensory perceptions during TIVAD insertion. The SIG method proved suitable for assessing and documenting patients' sensory perceptions.

Interpretation: The reported descriptions can be used (a) to develop a structured questionnaire to quantitatively assess sensory perceptions and (b) to prepare patients for what to expect with regard to sensory information experienced before, during, and after TIVAD insertion. This method for exploring and documenting sensory perceptions might be applicable to other diagnostic or therapeutic interventions.

Many patients with cancer require prolonged treatment with IV chemotherapeutic drugs. Repeated access to peripheral veins becomes increasingly difficult over the course of treatment and can become a challenge to doctors, nurses, and patients (Borst, de Kruif, van Dam, & de Graaf, 1992). Patent and safe venous access is essential for IV treatments because venous integrity may be compromised by cytostatic agents that are toxic to peripheral veins (Chen et al., 2007; Dede, Akmangit, Yildirim, Sanverdi, & Sayin, 2008; Wolosker et al., 2004).

A totally implantable venous access device (TIVAD) can offer a safe alternative for long-term administration of chemotherapy, blood transfusion, blood sampling, hydration, pain therapy, and other supportive care. Experience has shown that the catheters are safe and reliable (Wolosker et al., 2004). A TIVAD consists of a silicone septum mounted above a chamber that is inserted subcutaneously on the anterior chest wall. The chamber is connected to a catheter whose distal extremity is positioned at the junction of the superior vena cava and the right atrium (Caers et al., 2005; Kreis et al., 2007; Rodgers, Liddle, Nixon, Innes, & Greening, 1998; Schutz et al., 2004; Wolosker et al., 2004). Surgical insertion usually is performed in an operating room as a day-case surgical procedure and under local anesthesia by a team specialized in venous access insertion (Maurer, Beck, Hamm, & Gebauer, 2009; Rodgers et al., 1998).

Preoperative education is a common feature in preparing patients for many surgical procedures. Patients can be informed through an information pamphlet, audiovisual presentations, training, or a combination thereof (Hodgkinson, Evans, & O'Neill, 2000). The aim of preparing patients is to help them to be ready mentally for the invasive procedure. Self-regulation theory indicates that preparatory information enables patients to construct mental representations of the procedure (Nerenz & Leventhal, 1983). During the procedure, patients use the mental schemas to predict what they might experience.