

Development and Evaluation of the Special Hospital Gown for Postmastectomy Patients

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I. Introduction

As many as 175,000 women underwent invasive surgery for breast cancer in the United States (American Cancer Society, 1999). These breast cancer surgery patients required surgical closed wound drainage systems. Jackson-Pratt (JP) drains are usually inserted into the wound during surgery to prevent fluid buildup. After a mastectomy, patients have discomfort, high anxiety, and body image problems resulting from the wound and JP drainage tubes. The post mastectomy patients have drainage tubes that are sutured in place and connected to a reservoir that maintains constant low suction from the one breast and/or two breast wounds over 3 to 7 postoperative days. The purpose of this study was to develop a prototype hospital gown for post-mastectomy patients with the placement of Jackson-Pratt (JP) drains and to evaluate the special hospital gown for post-mastectomy patients with the placement of Jackson-Pratt (JP) drains.

II. Methods

Through interviews with postmastectomy patients and nurses at a large hospital in Texas, it was addressed special needs of hospital gown for postmastectomy patients. Based on discussions with the patients and nurses, the design specifications of the hospital gown were developed, and the initial garment was designed. The initial garments were evaluated by 11 postmastectomy patients in the hospital. After fitting the garments and correcting the patterns, the final prototype hospital gown for postmastectomy women was developed.

To evaluation of the Prototype Hospital Gown Use, the population for the study consisted of lumpectomy or mastectomy patients who live in their own homes after hospital discharge. The accessible population was those names are obtained from day surgery units. The study was done from January 15, 2002 to March 30, 2005 at two hospitals associated with major teaching universities. The Comfort Questionnaire (CQ) was developed specifically for this project. The CQ consisted of two sections. Section one included ten questions about the patient's physical and psychological comfort levels to the prototype hospital gown. The Wilcoxon matched-pairs

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signed-rank tests was used to measure the differences of the patients' comfort scores between worn the prototype hospital gown and worn the conventional hospital gown.

III. Results

1. Development of a Special Postmastectomy Gown

This gown was designed to have pockets that hold the JP drain and prevent the tubing from being pulled. It was developed to provide good accessibility of a drainage system that is required to wear after breast surgery, to facilitate wearing of the drainage system, and to provide function and appearance suitable for a nightgown.

This gown included a cloth web that is adapted to cover the body of a patient, a hole provided on the cloth web communicating the inside of the cloth web with the outside of the cloth web, a containing portion attached to the cloth web, a cover portion that is provided on the outside of the cloth web and covers the hole, and a fastener that fastens the cover portion to the outside of the cloth web. The hole had an elongated shape. The cover portion was an elongated strip that was pivotally attached to the outside of the cloth web. The elongated strip was attached to the cloth web longitudinally, and the hole, the containing portion and the cover portion were positioned toward the left side or the right side of the cloth web. The fastener included Velcro strips.

2 Evaluation of the Prototype Hospital Gown Use

As the results of the Wilcoxon matched-pairs signed-rank tests, there was a significant difference between safety scores worn the prototype hospital gown and worn the comprehensive hospital gown. The difference of easy-use scores between two gowns was significant. In the comfort level, the difference of scores between two gowns was significant. In addition, the difference of fit scores between two gowns was significant, and the difference of aesthetics scores was significant. These results indicated that the prototype hospital gown was designed more comfort, more adaptive, and more aesthetic than the conventional gown for the post-mastectomy patients.

IV. Conclusion

Hospital gowns are usually designed to provide basic function as clothing and easy maintenance. In addition, it is desirable for hospital gowns to provide an aesthetic appearance and to facilitate easy access to medical attachments to a patient such as a drainage system that should be used by a patient for some time after a surgery. The special gown developed for the study could contrive to achieve the above objectives and to solve the disadvantages of the prior art. The hospital gown, developed in the study, may be worn as a nightgown and lounging dress for out patients. A front-opening gown with raglan sleeves and a round neckline incorporates

common design features on both the hospital gown and nightgown. When the Drainage System is not used, the patient can wear the garment as a regular nightgown.

Based on the results of evaluation of the prototype hospital gown use, this gown could be important to solve the patients' physical and psychological problems resulting from the wound and JP drainage tubes. The results of the study revealed that the prototype hospital gown was designed better for the post-mastectomy patients with the placement of the wound drainage system. The gown was safer to carry the JP drainage system than the conventional hospital gown and was used easier than the conventional hospital gown in the patient's life. This gown was designed more comfort, more adaptive, and more aesthetic than the conventional gown for the post-mastectomy patients.

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