

## RESEARCH REVIEWS

**THROMBOEMBOLIC PROPHYLAXIS WITH USE OF ASPIRIN, EXERCISE, AND GRADED ELASTIC STOCKINGS OR INTERMITTENT COMPRESSION DEVICES IN PATIENTS MANAGED WITH TOTAL HIP ARTHROPLASTY**

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Deep venous thrombosis (DVT) is the primary source of pulmonary embolism (PE) and a well-known risk associated with total hip arthroplasty. Generally, either pharmacologic, mechanical, or a combination of methods of DVT prophylaxis are used to prevent this complication. The purpose of this cohort retrospective study was to determine the rates of fatal pulmonary embolism, nonfatal pulmonary embolism, and clinically symptomatic DVT in a group of patients receiving a prophylaxis consisting of aspirin, intraoperative and postoperative exercises, and graded elastic stockings or intermittent compression devices.

**Methods.** The study consisted of 1,267 patients who underwent 1,492 total hip arthroplasties (1,313 primary and 179 revision procedures). Of the procedures, 774 (51.9%) were performed in Miami, and 718 (48.1%) were performed in Los Angeles. The average hospital stay was seven days. Of the arthroplasties, 865 (58%) were performed on women, and 627 (42%) were performed on men. The average age of the patient at the time of surgery was 63 years. Patients were tracked for a minimum of three months. Epidural anesthesia was used for

1,099 (73.7%) procedures, and general anesthesia was used for 393 (26.3%) procedures. During the surgeries, surgical team members were instructed to avoid extreme flexion and internal rotation of the hip and knee and to carry out passive exercises of the hip, knee, and ankle to avoid damage to the intimal layer of the popliteal and femoral vessels.

Graded elastic stockings were applied postoperatively on 774 (51.9%) patients, and intermittent compression devices were applied on 718 (48.1%) patients. Walking began on postoperative day one. Active isometric and isotonic exercises were performed for two minutes at 15-minute intervals during the immediate postoperative period. Patients received a 600 mg aspirin suppository postoperatively and continued to receive 325 mg of aspirin by mouth, twice per day, until discharged.

Clinical diagnosis of DVT was made when at least one symptom was present (eg, tenderness of the calf or inner thigh; leg, ankle, or foot edema; positive Homans sign; slight elevation of temperature). Diagnosis of PE was established based on clinical findings, blood gas determination, suggestive changes on chest x-rays, and electrocardiograph findings.

**Results.** Fatal PE occurred in two (.013%) patients. Clinically evident PE occurred in 14 (.094%) patients. The diagnosis of DVT occurred in 15 (1%) patients, including six who wore graded elastic stockings and nine who wore intermittent compression devices. Statistically, there was no difference ( $X_2 = .085$ ;  $P > .05$ ) between the two mechanical methods of treatment. No correlation was noted between geographic locations and the development of

DVT or PE. A significant difference was noted between those patients who received epidural anesthesia and general anesthesia in the occurrence of nonfatal PE ( $P < .001$ ) and DVT ( $P < .025$ ). No significant difference was found between the use of elastic stockings and intermittent compression devices in the prevention of thromboembolic complications.

**Discussion.** Low molecular-weight heparin and warfarin have been found to be more effective in the prevention of DVT than other methods. These chemical modalities, however, result in a clinically higher rate of bleeding.

Increasing numbers of people are taking aspirin as a prophylaxis against coronary disease. In this study, researchers did not know how many patients had taken aspirin before their surgery, and, therefore, were unable to determine the most effective dosage of aspirin that should be administered as a prophylaxis against DVT.

It has been suggested, but never documented in the literature, that there may be a geographic difference in the prevalence of thromboembolic disease. No significant difference was noted in this study.

**Perioperative implications.** The findings of this study suggest that an inexpensive protocol of aspirin, exercise, and the use of graded elastic stockings or intermittent compression devices is associated with reduced postoperative thromboembolic complications. Researchers did not indicate whether the mechanical methods used were thigh- or knee-high in length. Many hospitals are beginning to evaluate the use of nonpharmacologic prophylaxis for thromboembolism. Based on the findings of this study, it is suggested that the choice of graded



elastic stockings or intermittent compression devices may increase patient comfort and compliance and also achieve a cost savings.

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### **HYSTERECTOMY: WHAT DO WOMEN NEED AND WANT TO KNOW?**

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**H**ysterectomies are one of the most common surgical procedures women undergo in the United States, so the nursing community should explore both the physiological and psychosocial effects of this procedure using a variety of methodologies (ie, qualitative, quantitative, delphi). This qualitative study examined women's personal hysterectomy experiences to discover possible fears, concerns, or education needs they believe were not addressed adequately.

**Design and sample.** The study design was a written survey used to collect narrative data of women's hysterectomy experiences. Of 200 women from south-eastern Wisconsin that received the survey, 181 (91%) returned it. The women's mean age was 43, heritage was 90% European-American, and 63% were married or living with a partner. More than 80% were college prepared, and 94% were employed.

**Method.** Researchers conducted a thematic content analysis of demographic data and written responses from 102 women. Women were asked three open-ended questions.

- Overall, how would you describe your hysterectomy experience?
- What fears, concerns, or questions related to your hysterectomy do you still have?
- How could your educational needs regarding your hysterectomy have been better met or served?

Researchers recognized that collecting cross-sectional data in one community from a homogenous sample and the fact that women's experiential descriptions required recall were limitations of the study.

**Results.** Researchers discovered seven themes demonstrating similarities and differences among the participants. One theme, positive aspects, demonstrated that 61 women received relief from troublesome symptoms, received good information and support from their providers, and actively participated in decision making.

Another theme, hormone replacement therapy (HRT), showed that 45 of 77 women receiving HRT were fearful and concerned due to a lack of information and participation in decision making. Some also thought their health care provider did not conduct adequate follow-up care or monitoring after prescribing HRT.

A third theme, insufficient information, showed that 38 of participants thought they received insufficient information about hysterectomy, their own anatomy and physiology, and menopause. These women wanted current literature, books, articles, or videotapes.

Sexual concerns, yet another theme, showed that 20 participants thought the health care system lacked a structure for providing emotional support throughout the hysterectomy experience. These women wanted prephys-

terectomy and posthysterectomy support groups, a hotline for questions, and opportunities for interpersonal female discussion.

Psychologic sequelae and feelings of loss, another theme, demonstrated that 17 women experienced psychological distress associated with hysterectomy, ranging from mood swings to one instance of clinical depression. A small number of women of childbearing age reported feelings of grief and loss. Changes in femininity, body image, and issues related to infertility also were mentioned by respondents.

**Discussion.** Researchers reported the most common themes among participants included a need for accurate and realistic information before and after surgery; provider support; and access to adequate resource systems related to positive aspects of hysterectomy. Many women experienced difficulty obtaining information and support, although the demographic characteristics suggested that they were positioned to obtain the information and services needed.

Future research should include women from diverse ethnic groups and socially disadvantaged women living in remote areas. Women's health care delivery systems and organizational structures also should be researched in depth.

Based on the results of this study, perioperative nurses practicing in surgical suites, delivery suites, and women's centers need to provide adequate preoperative and postoperative surgical information, as well as organized support systems for women undergoing hysterectomies or other major life-changing surgeries. Providing open and accessible relationships that encourage inclusive decision-making with patients will contribute to an uneventful