



Randomized Controlled Trial Comparing Simple Light Dressing (Transparent Film Dressing) Versus Pressure Dressing (Elastoplast) After Femoral Arterial Sheath Removal

■ Jian Liu, BSN, RN; Sau Kheng Agnes Wong, Post Basic (INCC), RN; Yuwei Wang, BSN, RN; Vijayarani Nagalingam, BSN, RN; Chow Wei Too, MBBS, FRCR; Seng Giap Marcus Ang, BSc (Nursing), RN; and Shin Yuh Ang, MBA, BSc (Nursing), RN

ABSTRACT: Pressure dressings were routinely used to prevent further bleeding after femoral artery sheath removal. Many patients often complained of discomfort during and after removal of the pressure dressing. This study aimed to evaluate the clinical effectiveness of a transparent film dressing and conventional pressure dressing in terms of incidences of hematomas, bleeding, skin loss, and level of comfort experienced. A randomized controlled trial study was conducted to compare the patients with pressure dressing and transparent film dressing in radiological-guided invasive procedures requiring retrograde femoral artery puncture. Outcome variables included incidences of bleeding, hematoma, skin integrity, and comfort level during and after the dressings were removed. A total of 260 patients were enrolled and most patients had undergone visceral intervention with size 5 Fr vascular sheaths inserted. There was no significant difference in bleeding and formation of hematoma ($p > 0.7$) and loss of skin integrity ($p = 0.1$). However, 39% of the patients in the pressure dressing group experienced discomfort compared with 5% of patients in the transparent film dressing group ($p < 0.01$). Results of this study supported the use of transparent film

Jian Liu, BSN, RN, Nurse Clinician, Department of Diagnostic Radiology, Singapore General Hospital, Singapore; Sau Kheng Agnes Wong, Post Basic (INCC), RN, Nurse Manager, Department of Diagnostic Radiology, Singapore General Hospital, Singapore; Yuwei Wang, BSN, RN, Assistant Nurse Clinician, Department of Diagnostic Radiology, Singapore General Hospital, Singapore; Vijayarani Nagalingam, BSN, RN, Assistant Nurse Clinician, Department of Diagnostic Radiology, Singapore General Hospital, Singapore; Chow Wei Too, MBBS, FRCR, Consultant, Department of Diagnostic Radiology, Singapore General Hospital, Singapore; Seng Giap Marcus Ang, BSc (Nursing), RN, Senior Staff Nurse,

Nursing Division (Research), Singapore General Hospital, Singapore; Shin Yuh Ang, MBA, BSc (Nursing), RN, Senior Nurse Manager, Nursing Division (Research), Singapore General Hospital, Singapore.

Corresponding author: Jian Liu, Department of Diagnostic Radiology, Singapore General Hospital, 31 Third Hospital Avenue, Bowyer Block B Level 2, Singapore 168753. E-mail: liu.jian@sgh.com.sg
1546-0843/\$36.00

Copyright © 2016 by the Association for Radiologic & Imaging Nursing.
<http://dx.doi.org/10.1016/j.jradnu.2016.06.001>

dressing after femoral artery sheath removal. The use of transparent film dressing did not lead to an increase in bleeding or hematoma formation and has provided greater comfort to patients. (J Radiol Nurs 2016;35:227-235.)

KEYWORDS: Transparent film; Pressure dressing; Femoral sheath; Bleeding; Discomfort; Radiology nursing.

INTRODUCTION

Radiological-guided invasive procedures are increasingly popular. Such procedures include angioplasty, stenting, thrombolysis, transarterial chemoembolization, and cerebral angiography. At Singapore General Hospital, which is a tertiary acute hospital in Singapore, more than 7,000 procedures are performed every year at its Interventional Radiology Center (SGH, 2014).

During these procedures, a main artery (most common being femoral) is accessed and a catheter/sheath is inserted into the blood vessel under X-ray guidance. The catheter/sheath is removed subsequently, and pressure is applied at the arterial puncture site to achieve hemostasis. Sometimes, special closure devices are used to seal the puncture site. Management of puncture sites after sheath removal and achievement of hemostasis is an important aspect of nursing care to prevent possible complications, such as local infection, bleeding, and hematoma formation after the procedure.

Despite hemostasis that was achieved at the femoral puncture site, some patients experienced recurrent bleeding. A prospective descriptive study was conducted in three university hospitals in Melbourne to describe the incidence and occurrence of femoral artery bleeding after coronary angiography (Botti, Williamson, & Steen, 2001). The study found that 5.1% of 1,075 patients (N = 55) experienced a recurrent bleed despite controlling for other variables, such as sheath size, length of pressure, and puncture site (Botti et al., 2001). The bleedings had occurred with a median of 2.02 hr after angiography (Botti et al., 2001). Therefore, it has been a long tradition to use pressure dressing to prevent local vascular complications among patients who have undergone femoral artery puncture (Botti, Williamson, Steen, McTaggart, & Reid, 1998). Pressure dressings helped to exert direct pressure on the femoral puncture site and keep the affected leg/arm straight (Lehmann, Ferris, & Heath-Lange, 1997).

At the Interventional Radiology Centre in Singapore General Hospital, pressure dressings were routinely used to apply continuous pressure over the arterial puncture site to prevent further bleeding after removal of sheath and achievement of initial hemostasis. Patients are instructed to lie in bed while keeping the affected leg/arm straight. Vital signs are taken

every hour for 4 to 6 hr, and patients are observed closely for any signs of bleeding. However, many patients complained of discomfort during and after removal of the pressure dressing. Common complaints included skin irritation, pain, rash, blisters, and skin tear after the pressure dressing was removed (McLe, Petite, Pride, Leeper, & Ostrow, 2009; Singleton, 1997). The radiology nurses were also concerned as they had difficulty observing the puncture site for any signs of bleeding, hematoma, or other groin complications when the pressure dressing was in place.

Review of the Literature

Few studies have been conducted to compare the efficacy of pressure dressing against other forms of lighter dressings for the management of arterial puncture sites after the procedure. In the few studies found in the literature, lighter dressings were associated with lower incidences of loss of skin integrity, no difference in incidence of hematomas and bleeding, and higher levels of comfort. A quality improvement project compared the use of soft cloth surgical tape (Medipore) (3M Health Care, Saint Paul, MN) with pressure dressing among 60 patients after femoral artery sheaths removal (Singleton, 1997). The patients with Medipore tape had significantly lower incidences of loss of skin integrity than patients with pressure dressing (Medipore tape = 6.7% and pressure dressing = 80%) (Singleton, 1997).

Other studies reported that the use of lighter dressing does not lead to an increase in incidence of hematomas and bleeding. In a randomized controlled trial on patients who underwent coronary angiography, Robb and McLean (2000) found that there was no significant difference in the incidence and size of hematoma after sheath removal between patients receiving conventional pressure dressing (n = 338) and Bandaid (n = 181) (Johnson & Johnson, New Brunswick, NJ). The study also reported that 10 patients from the pressure dressing group experienced a rebleed after hemostasis was achieved as compared with only seven patients with no pressure dressing (pressure dressing = 3% and no pressure dressing = 2.2%) (Robb & McLean, 2000). In another study, the researchers compared the use of light transparent tape (Tegaderm) (n = 63) (3M Health Care, Saint Paul, MN) to

Download English Version:

<https://daneshyari.com/en/article/2673087>

Download Persian Version:

<https://daneshyari.com/article/2673087>

[Daneshyari.com](https://daneshyari.com)