

## **Title**

Comparative study of two Nitroglycerin and Clobetazol  
ointments in prevention of phlebitis related with  
intravenous catheters

**A Thesis Presented for the Degree of Master of Sciences**

**In Critical Care Nursing**

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## Abstract

**Background:** Although the use of intravenous injection today is one of the most common in invasive medical care, but like every other method has a lot of side effects. The most common complications of phlebitis and its prevention is one of the therapeutic targets. Accordingly, this study aimed to determine the effects of clobetasol topical nitroglycerin as a due to the prevention of superficial phlebitis.

**Materials and Methods:** This clinical trial study on 144 patients admitted to the male surgery ward in Valiasr Arak hospital in 1392. Patients were randomly divided into three groups: Group A (clobetasol), Group B (NTG) and Group C (control). Questionnaire includes demographic information and measures phlebitis. Intervention group after venipuncture distal portion IV catheter was applied ointment (2g) and dressing area. Three periods of 24, 48 and 72 hours of venipuncture, site of phlebitis was evaluated. To analyze data the chi-square and Fisher's exact statistical test and SPSS 19 software was used.

**Results:** The results showed that the age group 39 to 20 years age group, formed the most common. Most common site of cannulation in the clobetasol group, 62/5% in the nitroglycerin group, 59/5% matched control group 46/9% back of hand. The results showed that incidence and degree of phlebitis at 24 and 48 hours after IV catheter placement in three groups was not statistically significant. But the rate of decline in the incidence and degree of phlebitis at 72 hours after IV catheter placement between intervention and control groups was significant ( $P < 0/0001$ ). Phlebitis associated with reductions in grade 24 and 48 hours after insertion of IV between intervention and control groups was not significant. However, the degree of reduction in the 72 hours after insertion of IV phlebitis between intervention and control groups was significant ( $P < 0/026$ ).

**Conclusion:** This study showed that the use of nitroglycerin in prevention of superficial phlebitis caused IV catheter been effective. The results therefore suggest that nitroglycerin for the prevention of phlebitis in patients who require long-term (more than 48 h) IV catheter be used.

**Keywords:** clobetasol, nitroglycerin, phlebitis, IV catheter