



## Service Priorities and Programmes Electronic Presentations

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### **Compressive Cryotherapy Enhances Recovery After Knee Arthroscopy.**

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#### **Introduction**

Knee arthroscopy is a common procedure in the management of ACL deficiency; meniscal injury and other intra-articular problems. Range of motion (ROM) being affected by pain and swelling after arthroscopy is one of the key factors affecting hospital discharge. Cryotherapy, an evidence-based electrotherapeutic modality has been employed by physiotherapists in managing post traumatic or surgery induced swelling and pain. Compressive cryotherapy, a new technology comprising compression and cryotherapy is now available and highly recommended for the extra benefit on swelling control.

#### **Objectives**

The purpose of this study is to evaluate the clinical effectiveness of compressive cryotherapy in the control of pain and swelling after knee arthroscopy.

#### **Methodology**

Forty patients receiving knee arthroscopic procedures were recruited and randomly assigned prospectively to study and control groups (n=20). Compressive cryotherapy with medium pressure was given to study group whereas control group received just ice pack, both were for 20 minutes. The effects after first treatment on both group was evaluated. Pain in Numerical Pain Rating Scale (NPRS) with range from 0 to 10, ROM by standard goniometry and swelling by tape measurement revealing the circumference at the level of base of patella with knee in full extension were assessed. Intra and inter-group comparison of these parameters measured immediately before and after the cryotherapy was done by paired t-test.

#### **Result**

**Results** Study group showed significant decrease in pain, increase in extension and flexion range, and reduction in circumference (P<0.001, P=0.030, P<0.001, P=0.001) after the treatment. Control group however show significant decrease in pain, increase in flexion range and reduction in circumference (P<0.001, P=0.011, P=0.010) but no difference in the extension range (P=0.794) after the intervention. When comparing between the 2 groups, both pain (P=0.002) and flexion range (P=0.045) were significantly greater in study group than control group. No significant difference however was found neither in extension range (P=0.211) nor circumference (P=0.662)

between the groups. **Conclusion** In this study, both study group and control group are effective in reducing pain and improving flexion range after knee arthroscopy. Compressive cryotherapy however is superior than conventional cryotherapy in the form of ice pack in reduction of pain and regaining knee flexion range, which in return would enhance the recovery of patient such as restoration of independent ambulation after knee arthroscopic procedures.