



**Service Priorities and Programmes**  
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**Developing an Evidence-based Protocol on Wound Drain Management for Total Joint Arthroplasty**

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Evidence-based Protocol

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**Introduction**

Although various drains have long been used for many years in total joint replacement, there is a paucity of evidence for the benefit of drain applications. It does not have a consistent practice in either using drainage system, intermittently applying suction or free of suction in the entire application of drain as well as the optimal timing for wound drain removal.

**Objectives**

It aimed to perform a systematic review to develop an evidence-based nursing protocol to manage wound drain following total joint arthroplasty.

**Methodology**

A comprehensive systematic review of available evidence up to 2013. Searches of the EMBASE, Cochrane library, CINAHL, Medline electronic databases and Internet search by Yahoo and Google engine returned 2840 records, of which 11 met the inclusion criteria for this review. Further two papers were obtained through screening the reference lists of those articles included from the initial literature search.

**Result**

Different clamping time was retrieved in literature. A protocol was adapted for clinical application according to the summary of the retrieved information. It is suggested to perform 1-hour clamping after the suction drains post-operatively at the Operating Theatre. Wound drain should be clamped for 1 hour if blood loss is more than 600 ml in 6 hours in first 24 hours. Wound drain should be clamped for 1 hour if blood loss is more than 800 ml in 8 hours thereafter. The drainage reservoir bottle is suggested to mark and record in line with the principle of drain clamping. It means that the amount of drainage is measured and recorded every 6 hours in first 24 hours and every 8 hours thereafter. Wound drain is suggested to remove before 48 hours after TJR. If blood loss is less than 50 ml in past 6 hours or less than 70ml in past 8 hours, the drain is suggested to remove and the wound site should be monitored closely. Otherwise, drain should be kept with the same clamping principle of drain. This paper has guided nurses to develop an evidence-based protocol to improve patient care on

wound drain management. Further study is necessary to evaluate the effectiveness of the protocol.