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A retrospective audit- Total Knee Replacement using sequential compression comfort sleeve to reduce the risk of deep vein thrombosis

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INTRODUCTION

Total knee Replacement (TKR) is one of the most painful joint operation and thus, having adequate analgesia is important for early rehabilitation and recovery. Maynard et al, 1991 reported that the risk of developing deep vein thrombosis (DVT) after TKR is about 84%, up to 17% of patients reported to have pulmonary embolism.(PE)

In KTPH from 2013 to 2014, a total of 317 patients underwent TKR and 8 patients developed DVT and 1 had PE.

Bussey, 2004 mentioned use of enoxaparin (drug prophylaxis) with intermittent compression devices may eliminate DVTs in patients undergoing their first unilateral knee or hip replacement.

RESULTS

Patients who underwent TKR, estimated length of stay is at least 4-5 days post operate and the total cost of the cuff sleeve used for prevention of DVT is less than \$90.

But patients who developed DVT or PE, rehabilitation is delayed due to pain and length of stay in the hospital will be prolonged, to at least 2-3 weeks. Moreover, patients would be on long term prophylaxis therapy that would required frequent follow up in the clinic.

In all 94 patients who underwent TKR, no DVT or PE had been observed during their stay in the hospital. Most importantly, the use of sequential compression applied for all TKR patients had proved to reduce the risk of post operative DVT.



METHODS

A retrospective analysis was collected in KTPH from August 2015 to March 2016, a total of 94 patients underwent TKR. All patients underwent TKR will be placed on the compression comfort sleeve, attached to the compression pump. It would be administered during intra-operative till post operatively when patients are able to ambulate independently.



Covidien compression pump

CONCLUSION

A combined nursing effort begins from Major Theatre, patients who underwent TKR will be attached to the Covidien compression pump. The operated leg being applied with the sequential compression comfort sleeve over the lower calf – using foot calf and the non operated leg applied with the knee length sleeve.

In summary, the use of drug prophylaxis with application of intermittent compression device has shown good results with no DVT complications.

Mdm X after TKR,
ambulating on
POD 2.

