The Deep Vein Thrombosis (DVT) Prevention Program For Neurosurgical Patients In Queen Elizabeth Hospital
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Introduction
In our department, most of patients have undergone a major and prolonged surgery followed by a long period of immobilization that would contribute to have DVT formation. Pulmonary embolism is a serious and life threatening complication of DVT, in view of this, our department has started to implement the DVT Prevention Program since 2001. The DVT prevention program includes guidelines, risk assessment tool and nursing care plan for neurosurgical patients during hospitalization.

Objectives
1. To identify high risk patients for development of DVT.
2. To provide appropriate DVT preventive measures and nursing care to patients.
3. To enhance nursing staffs' knowledge and awareness in DVT prevention care.
4. To minimize DVT formation in hospitalized patient.

Methodology
In this program, all patients have been assessed on the risk of DVT formation by using “Autar DVT Scale” on admission, post operation day and subsequent change in condition, and preventive measures were taken accordingly. The program was revised in 2011 based on the new version of the Autar DVT scale and the assessment protocol. An assessment supplementary sheet was developed as guidance. We have designated ward nurses as DVT prevention group coordinator, helping to monitor and supervise ward staff to perform the assessment together with the prevention care plan. In addition, a yearly staff training program is carried out to enhance staffs' knowledge and awareness on DVT prevention. Health education and patient / family engagement is also important for the DVT prevention program such as the compliance with the use of anti-embolic stockings as well as pneumatic pump. In collaboration with other departments, pneumatic pump should be applied intra-operatively if no contra-indication. Occupational therapist will be referred for further assessment and fabrication if patient requires specific size of stockings and splints. For monitoring of the DVT prevention care, periodical audits were conducted to evaluate the compliance of nursing care plan and effectiveness of the program.
**Result**

According to the audit results, the compliance rate of DVT assessment and implementation of preventive measures was similar: 93% (2012), 92% (2013) & 94% (2016); the percentage of high risk cases that can be identified was gradually increased: 33%(2012), 33%(2013) & 58%(2016); the percentage of cases diagnosed with DVT was steadily decreased: 0.59% (2013), 0.55% (2014), 0.42% (2015) & 0.35% (2016).

Conclusion: The DVT prevention program helps nursing staff to understand the significance of DVT prevention. It also facilitated us to identify high risk cases earlier during hospitalization, thus we can provide appropriate prevention care to patients promptly to minimize DVT formation.