

## **Editorial**

### **Deep Vein Thrombosis (DVT): Risk assessment for surgical patients**

In this issue of the Sri Lankan Journal of Anaesthesiology, Perera IACL<sup>1</sup> and Seneviratne et al<sup>2</sup> present audits regarding usage of venous thromboembolism (VTE) prophylaxis in critically ill patients and general surgical patients respectively at a tertiary care teaching hospital in Sri Lanka. Both papers highlight the need for risk assessment for deep vein thrombosis by the relevant teams involved in the management of the patients.

The dangers of deep vein thrombosis and pulmonary embolism have long been recognized. Pulmonary embolism is the most common cause of preventable deaths in the hospital. In addition to the morbidity and mortality it entails there is a cost implication as well. They are also known to be a major complication of cancer and are one of the leading causes of mortality from cancer. Though the actual incidence of DVT in Sri Lankan surgical populations has not been reported it is a common belief that there is a reasonable incidence<sup>3,4</sup>. The problem often is that the risk status is not assessed based on patient and surgical factors and appropriate preventive measures are not adopted. There is strong evidence that appropriately used thromboprophylaxis has a desirable benefit to reducing the risk ratio, and is cost effective. But what is highlighted in the two audits published is that there is a gap between recommended and actual and appropriate use of thrombo-prophylaxis.

The risk factors for DVT and VTE arise from the 3 underlying components of Virchow's triad, which are venous stasis, hypercoagulability and injury to the intima of veins. Some of the risk factors would be easily identifiable where as some would not be.

We think it is timely that every patient admitted for a surgical procedure undergoes a risk assessment for DVT, both by the surgical and anaesthetic teams in order to use prophylactic measures to prevent morbidity and mortality.

In order to assess the risk we should adopt a risk assessment tool many of which are available worldwide. North American Thrombus Forum (NATF), PreventDVT.org would be some of the risk assessment tools available online for easy assessment.

The latest NICE (National Institute for Health and Clinical Excellence) UK, guideline 92 issued in January 2010 on venous thromboembolism: reducing the risk, would be the most updated and appropriate guideline to follow<sup>5</sup>. It identifies risk factors for medical, surgical and traumatized patients and individual patient risk factors. It also advocates the assessment of risk of bleeding and the care plans are drawn up balancing the risk of DVT vs the risk of bleeding.

It advocates adequate hydration, early mobilization, not to regard aspirin and other anti platelet therapy as appropriate prophylaxis and the need to offer temporary

inferior vena cava filters to patients who are at high risk but unable to use mechanical or pharmacological prophylaxis. It further stresses the need for continuous assessment for risk and the need to provide information and instructions to patients on discharge from hospital.

As much as we use these guidelines in the short term it would be most appropriate that the incidence and mortality and morbidity figures for Sri Lanka are identified by epidemiological studies. It would be then appropriate to identify the risk factors for a Sri Lankan population and prepare a risk indicator and an appropriate prophylactic regime guideline. Even though pharmacological prophylaxis is widely available in our hospitals the use of mechanical devices are still in a stage of infancy, mostly due to lack of availability.

Epidemiological data would also indicate to the authorities the need to provide appropriate prophylactic devices and pharmacological agents to the health service.

## References

1. Perera IACL. Venous thromboembolism prophylaxis usage in critical care units in National Hospital Sri Lanka. *Sri Lankan Journal of Anaesthesiology*; **Vol. XX**; No1; January 2012
2. Seneviratne M, Hemachandra A, Abayadeera A. Audit of venous thromboembolism prophylaxis administered to general surgical patients undergoing elective and emergency operations at national hospital, Sri Lanka. *Sri Lankan Journal of Anaesthesiology*; **Vol. XX**; No 1; January 2012
3. Sheriffdeen AH, Wijayaratna M. Deep vein thrombosis in Sri Lankans; Time to take notice. *Ceylon Medical Journal*; **Vol. 46**; No.1, March 2001.
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5. CG92 Venous Thromboembolism - Reducing the Risk: NICE guideline; <http://guidance.nice.org.uk/CG92/NICEGuidance/pdf/English>.

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