# Platinum chemotherapy associated thrombo-embolic events in Head and Neck Cancer patients

**Descriptor:**

To evaluate the incidence of thrombo-embolic events in head & neck cancer patients treated with platinum - based chemotherapy

Objectives:

- To quantify the incidence of TEE (venous and arterial) in all patients receiving platinum based chemotherapy for head and neck cancer

- To quantify risks and collect data on recognised risk factors within this population

- To quantify the use of LMWH prophylaxis,if this impacts on the incidence of events

**Background:**

Increased incidence of thrombo-embolic events in cancer and chemotherapy patients is well recognised. Head and neck cancer patients are thought to be in a lower risk group for TEE development and they are a less well-studied patient group than other cancer populations. There was clinical concern amongst the SCAN population after a series of patient’s experienced thrombo-embolic events in a relatively short time period. Local incidence of TEE and anti-coagulation prophylaxis rates, had not been previously quantified in H&N cancer patients in the SCAN population. Recent trials reported overall incidence of TEE in Cisplatin treated cancer population of 18% (13% in H&N patients) [1]. Should we be anticoagulating some/any of these patients and how do we identify those at high risk?

## The Cycle

**The standard:**

The Khorana score is a validated predictive model which quantifies the risk of venous thrombo-embolism in cancer patients receiving chemotherapy and has been adopted in previous studies of TEE incidence in patients treated with Cisplatin-based chemotherapy [1-2].

ASCO (2007) and ESMO (2011) guidance:

- Prophylactic anticoagulation recommended for ‘hospitalised cancer patients’

- Prophylactic anticoagulation NOT recommended for ambulant patients on outpatient anticancer treatment unless considered ‘high risk’ such as with use of Lenalidomide or Thalidomide

- LMWH is preferred anticoagulant to Vitamin K antagonists but little guidance on what to give and when to administer

**Target:**

The audit was carried out to provide baseline data to facilitate discussion around primary prophylaxis with anticoagulation in this group and predictors of TEE, to provide evidence for target setting in future policy/audits.

## Assess local practice

**Indicators:**

• TEE incidence (H&N cancer patients)

• LMWH prophylaxis rates (H&N cancer patients)

• Overall Survival

• TEE Specific Survival

• Anti-coagulation-related outcomes (complications)

**Data items to be collected:**

- Age

- Sex

- Ethnicity

- Cancer site

- Histopathological stage

- p16 status

- TNM Stage

Treatment Data:

- Chemotherapy regime/intent

- Total cycles

- Cycle date (per cycle)

- Drugs administered (per cycle)

- LMWH prophylaxis administered?

Risk Factors:

- Smoker?

- Past VTE?

- Ischaemic Heart Disease?

- Past Cerebrovascular Disease?

- Hypertension?

- Diabetes?

- Post-operative?

- Central line?

- PICC?

- IV filter?

Khorana Variables:

- Platelets >350x109

- Leucocytes >11x109

- Hb <10g/dL

- BMI (kg/m2)

- ESA use?

Thrombo-embolic events:

- TEE?

- TEE type

- Date positive radiology diagnosis

- Days since last chemotherapy cycle

- Symptomatic?

- Treatment plan delayed/altered?

- Anticoagulation used?

- Anticoagulant complication?

- Date of complication

- Details of complication

- Mortality

- Date of death

**Suggested number:**

50+

**Suggestions for change if target not met:**

Review of anticoagulant policy.

**Resources:**

• Access to patient notes electronic / paper

• Set up Excel spreadsheet for collection and analysis of data

**References:**

1. Moore RA, Adel N, Riedel E, et al: High incidence of thromboembolic events in patients treated with cisplatin-based chemotherapy: A large retrospective analysis. J Clin Oncol 2011;29:3466-3473
2. Khorana AA et al: Development and validation of a predictive model for chemotherapy-associated thrombosis Blood 2008;111:4902-4907.

**Editor's comments:**

This audit is more easily performed prospectively but can be achieved retrospectively.

**Submitted by:**

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