

UNIVERSITI TEKNOLOGI MARA

**INTRAINDIVIDUAL AND INTERINDIVIDUAL
VARIATION OF OVERWARFARINIZATION AND
UNDERWARFARINIZATION ADULT PATIENTS
IN SELAYANG HOSPITAL**

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ABSTRACT

Warfarin also known as vitamin K antagonist is an oral anticoagulant. It is indicated for prophylaxis and treatment of several diseases including venous thrombosis, atrial fibrillation with embolisation, and pulmonary embolism. This study is intended to assess patients who achieved targeted INR and who had not. This study will also evaluate the reasons why patients do not achieve their target INR. International Normalised Ratio, INR, is a laboratory test which measures time taken for blood to clot. It is useful in monitoring anticoagulation effect especially where warfarin is involved. INR range for AF patient is 2.0-3.0. Patients with AF have higher risk of stroke and bleeding when using warfarin as their treatment. Two types of score has been established which is CHADS score for assessing risk of stroke and HASBLED score to assess risk of bleeding. Patients on warfarin need to avoid foods that are high in vitamin K as it acts as a natural blood clotting factor which will alter INR. 38 patients who are diagnosed with atrial fibrillation are selected to participate in this research. The highest percentage (37%) of patients reached 1 out of 4 readings of below range. This will be discussed further using CHADS2 score to evaluate stroke risk. These 14 patients (37%) have CHADS scored between 3 to 6, which the stroke risk lies between 5.95 per year to 18.2% per year. INR is almost well controlled since patients with high risk of stroke have only zero or one reading below range. 13 patients have two INR reading (50%) of within range. 4 patients which is 10% has all of INR reading of within range (100%). All of patients with 100% INR within range are free from complications of warfarin. 53% of patients reached zero out of 4 readings of above range. This will be discussed further using HASBLED score to evaluate bleeding risk. None of these patients have 3 to 4 readings of above range which indicates good controll of bleeding. 5 patients have 2 readings above range scored 2 to 4 signifying 2% to 9% risk of bleeding. Reasons of patients with INR below range include missed dose, green vegetables intake and drug interaction. Reasons of patients with INR above range includes double dose and drug interaction. As a conclusion, INR control is good since those with higher risk of stroke only 1 or 2 readings below range. Bleeding control is considered excellent since 53% of the patients do not have many INR above range. This MTAC clinic has been proven to show significant benefits towards anticoagulant therapy control.