

Thyroid malignancy rates and outcomes of TIRADS 3 and TIRADS 4A patients who have undergone elective thyroidectomy in a tertiary centre in Selangor

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ABSTRACT

Introduction: Thyroid nodule has 5-10% malignancy rate in Malaysia. TIRADS 3 and 4A category patients pose a challenge in terms of managing conservatively or surgically. This study aimed to investigate the malignancy rates and outcomes of patients who had undergone elective thyroid surgery. **Methods:** A cross-sectional study was performed using medical records of adult patients (age ≥ 18 years old) who had undergone elective thyroid surgery from 1st January 2015 to 31st December 2020. **Results:** In all 94 patients fulfilled the inclusion criteria, with TIRADS 3, n=43 and TIRADS 4A, n=51. Mean size of thyroid nodule for TIRADS 3 is 3.66 +/- 1.35cm, TIRADS 4 is 3.71 +/- 1.86. 90% underwent FNAC procedure and 46.8% went through at least 2 times of FNAC. 61% underwent hemi-thyroidectomy, with 70% indicated for suspicion of malignancy. Tirads 3 recorded 5.4% of malignancy in low BETHESDA category (1-3), 16.7% in high BETHESDA category (4-6), p value 0.315. TIRADS 4A reported 9.3% vs 62.5% malignancy rates, in low vs high BETHESDA category, p value 0.001. Recurrent laryngeal nerve injury (RLNI) and haematoma were the highest post-operative complications recorded for TIRADS 3; for TIRADS 4A, it was hypocalcemia and RLNI. Both TIRADS 3 and TIRADS 4A recorded low rates of malignancy (5.3% vs 9.3%) with low BETHESDA score (1-3). Molecular testing of FNAC samples and radionuclide scan should be considered prior to surgery in TIRADS 3. **Conclusion:** Malignancy rates were 7% in TIRADS 3, 17.6% in TIRADS 4A. RNI and hypocalcemia were common complications.

Preoperative Haematocrit and Packed Red Blood Cell (PRBC) Transfusion during Isolated Coronary Artery Bypass Grafting (CABG) at Penang

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ABSTRACT

Introduction: Complex cardiac surgeries, redo sternotomy cases, salvage and emergent surgeries, and patients who have high EUROSCORE II scores are known to have higher intraoperative and postoperative blood transfusions. Perpetual need of blood and blood components also mount costs and resources efficiency on National Blood Banks. Transfusion related immunologic reactions and contracting infectious diseases via blood transfusion is another major issue that has to be addressed, especially in cardiac surgeries. **Methods:** A total of 130 patients who underwent Coronary Artery Bypass Grafting (CABG) operation between July 2020 till March 2021 were included in this study. Patient data were obtained prospectively from hospital registry. Local ethics committee approval was obtained. All the data obtained was entered into a form. The European System for Cardiac Operative Risk Evaluation (EuroSCORE) scoring system was used for preoperative mortality risk assessment. **Results:** Packed cell transfusion was higher among patients with low level of preoperative haematocrit especially those who had haematocrit below 30 had a higher risk of blood transfusion preoperatively. Blood transfusion was also high among patients with chronic kidney disease and longer cardiopulmonary bypass time. Patients with a relatively low platelet count preoperatively also was a strong predictor of perioperative blood transfusion. **Conclusion:** In this study, low preoperative haematocrit levels was associated with an increased risk of receiving a perioperative blood transfusion, which has many risks and side effects among patients undergoing Coronary Artery Bypass Surgery. Therefore, detecting and treating the cause of low preoperative haematocrit levels may eliminate unnecessary blood transfusions and undesirable consequences in patients undergoing surgery.