POSTER PRESENTATIONS

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Relationship between Incentive Spirometry Training and the Length of Stay in Intensive Care Unit after Coronary Artery Bypass Graft

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ABSTRACT

Background and Objectives: Incentive spirometry (IS) is a device widely used to measure the lung volume and train a slow, and deep breathing. IS is clinically proven to prevent postoperative pulmonary complications. The majority of hospitals in Malaysia follow the practice guidelines of using IS post-operative. However, the rate of Length of Stay (LOS) in the Intensive Care Unit (ICU) is increasing. This study aims to determine the relationship between IS training and the LOS in the ICU after Coronary Artery Bypass Graft (CABG). **Methods:** A correlational study involving 46 patients undergoing CABG was undertaken between July and November 2023. The participants received pre-operative and post-operative education and exercises that included practice of IS 10 times every hour. Lung volume as measured using the IS was recorded at preoperative, post-extubated, and post-operative before transfer to the ward. The days spent in the ICU and in the hospital were both recorded as LOS1 and LOS2 respectively. **Results:** The mean±SD age of the study participants (41 [89%] male) were 63±SD years. There was no significant association between post-operative IS and LOS1 ($r= 0.11$, $p= 3.09$). However, the study analysis found a significant association between post-extubated IS and LOS1 ($r= 0.14$, $p< 0.0001$). The mode of LOS1 is 3 days ($\sigma =1.05$). **Conclusion:** IS did not play an individual role effect on LOS in ICU, because interventions implemented always combined with breathing exercises, encouraged coughing, and earlier mobilization. Further studies are needed to evaluate the effect of IS on lung volume in post-CABG patients.

Keywords: Incentive Spirometry; Intensive Care Unit; Coronary Artery Bypass Graft Surgery; Length of Stay

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