Effects of EzPAP®

Post Operatively in Coronary Artery Bypass Graft Patients

Wiersgalla Susan, RRT, RCP, North Memorial Medical Center, Robbinsdale, MN.

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Objective

To improve post-operative atelectasis with Coronary Artery Bypass Graft patients as determined by chest X-ray. Also, further compare the results of EzPAP® therapy with Incentive Spirometry.

Description

EzPAP® from Smiths Medical combines patient negative pressure breathing and all of its benefits, with a positive expiratory pressure. Using a fluidic process, flow is augmented on inspiration. PEP is provided during expiration. This augmentation provides for a larger flow and volume with less effort than on unsupported inspiration.

Design, setting and participants

A study was conducted from August 2001 to October 2001 on 50 patients that were randomly selected to have either EzPAP® or Incentive Spirometry after post-op Coronary Artery Bypass Graft Surgery.

Measures

The chest radiograph was read by a radiologist. Atelectasis on the chest X-ray was reviewed and compared on post-operative day of surgery and after chest tubes were removed.

Results

The Incentive Spirometry group (n=20) showed improved atelectasis 25% vs. EzPAP® group (n=30) showed improvement of atelectasis 100%. This improvement was statistically significant (p<.001).

Conclusion

EzPAP® therapy has demonstrated measurable improvements in atelectatic post surgical Coronary Artery Bypass Graft patients, and should be considered a viable option in the pulmonary management of this population.