Multi-level surgery in obstructive sleep apnoea: Advantages and disadvantages

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ABSTRACT

Introduction: It is estimated that approximately 14% of adults around the world are affected with obstructive sleep apnoea (OSA). It is a common condition that has the potential to considerably impair quality of life and cause morbidity. Recently, a promising therapy option for OSA is multilevel surgery, which addresses several locations of upper airway obstruction. Materials and Methods: The articles searches have been done using the following databases: PubMed, Google Scholar, UpToDate, Medscape and Science Direct. Keywords that were used were obstructive sleep apnoea, surgical procedures, multilevel surgery, advantages and complications. Results: In the treatment of obstructive sleep apnoea (OSA), the most common types of multilevel surgery include the combination of uvulopalatopharyngoplasty (UPPP) with maxillomandibular advancement (MMA) and nasal surgery (such as septoplasty). Multilevel surgery can be performed in either single or multiple stages, depending on the patient's factors, level of obstruction, and surgeon preference. Patients selection for multilevel surgery are usually those who fail or are not compliant with continuous positive airway pressure (CPAP), patients with moderate to severe Apnoea-Hypopnea Index (AHI) and patients who have major structural airway abnormalities. The advantages of multilevel surgery in OSA patients are significant improvement in AHI, long-term improvements in sleep quality and daytime functioning, reduced dependence on CPAP and comprehensive treatment. However, there are some disadvantages such as increased risk of intra and postoperative complications such as bleeding, inconsistent outcomes that depend on the patient's and surgeon's factors, post-operative morbidity and recovery, as well as high cost. Accessibility for multilevel surgery is also still limited and not well practised in rural areas. Conclusion: There are significant advantages and disadvantages associated with the utilisation of multilevel surgery as a treatment for obstructive sleep apnoea (OSA). The limitations of this procedure are that not all centres practice this procedure, and the surgeon is still not familiar with the procedure. The surgical team's continual education and training can be crucial for upholding the highest quality of care and adjusting to new methods and technologies.

Keywords: Obstructive sleep apnoea, surgical procedures, operative, complications