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Complications of adenotonsillectomy

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Intro

Adenotonsillectomy is one of the most common procedures performed by otolaryngologists. Complications of this relatively simple operation may occur within the first 24 hours after surgery or weeks to months postoperatively (Display I). The current review presents complications of adenotonsillectomy according to their time of occurrence rather than their relative frequency.

Discussion

Indications for adenotonsillectomy have changed during the last years, according to recent developments in patient's care. Concomitantly, patients undergoing this procedure today are generally more ill than patients who had the surgery years ago. Patients today may have concomitant conditions that enhance their susceptibility to complications during the perioperative period (e.g. bleeding dyscrasias, cardiopulmonary disorders, gastroesophageal reflux disease and congenital syndromes). Such conditions may make surgery more challenging and necessitate more extensive postoperative care and resources. In addition, some medications that are taken for chronic (e.g. steroids) or common ailments (e.g. aspirin or nonsteroidal anti-inflammatory agents) may delay healing or destabilize clot formation, thereby increasing susceptibility to complications. I n contrast, other medications, such as antihypertensive and asthma medications, may assist postsurgical recovery by minimizing exacerbation of coexistent disease.

Results

Intraoperative Complications : Primary complications occur within the first 24 hours of adenotonsillectomy, either intraoperatively or immediately after the procedure. Anesthesia complications are a central concern. Dislodging of loose teeth, dislocation of the temporomandibular joint, accidental extubation or kinking of the endotracheal tube may result from use of the mouth gag. Atlantoaxial stability must be verified in high-risk groups, such as children with Down syndrome or mucopolysaccharidoes.

The risks of general anesthesia in adenotonsillectomy are acceptably low, but essential precautions are pivotal to a successful outcome. Secretions or blood in the hypopharynx must be suctioned to minimize the risk of laryngospasm and aspiration following extubation. Endotracheal tube is a potential risk with the use of electrocautery and is best avoided by reducing the oxygen content of the inspired gas and by applying a moist throat pack to minimize air leak around the endotracheal tube at the laryngeal inlet.

Hemorrhage, one of the most serious complications of adenotonsillectomy, may occur at any time

during the perioperative period . Intraoperative hemorrhage is much less frequent with the use of electrocautery. Delayed hemorrhage , the most common presentations of postoperative bleeding , usually occurs between postoperative days 5 and 10 as a results of premature separation of the eschar producing retraction of small surface vessels and overlying clot formation . Such an event may be precipitated by an underlying infection in the tonsillar bed or by dehydration .

Immediate Postoperative Complications : In the immediate postoperative period , most patients experience nausea , vomiting , oropharyngeal pain , or referred otalgia . Dehydration may occur with poorly managed pain , patients refusal to drink , or secondary to intractable nausea and vomiting , which is often due to narcotics prescribed for pain. Surgical edema may cause functional obstruction of the Eustachian tube orifice , whice may in turn lead to postoperative otitis media with effusion.

Of greater concern is the risk of postobstructive pulmonary edema , which may develop after relief of a longstanding , compensated upper airway obstruction . The removal of the obstruction superimposed on a baseline increase in intrathoracic pressure , can lead to a rapid increase in pulmonary hydrostatic pressure causing transudation of fluid into the pulmonary interstitium. A similar outcome may follow an inspiratory effort against an obstruction , as occurs , for example , in laryngospasm.

Delayed Complications

Superfical inflammatory processes in the tonsillar beds usually resolve with administration of saline or peroxide washes. However , marked pharyngitis can develop , especially in dehydrated patients , and requires systemic antibiotic therapy . Lung infections may result from atelectasis or loose teeth , blood , or tissue .

Velopharyngeal insufficiency is most likely to occur in patients with cleft palate or a previously undiagnosed palatal abnormality , such as a submucous cleft palate . Postoperative development of hypernasality usually resolves spontaneously and therefore warrants observation for up to 8 weeks . If symptoms persist , conservative management with speech therapy is advocated . If there is no improvement in 6 to 12 months , then surgical intervention is indicated .

Long-Term Complications

Nasopharyngeal stenosis , an uncommon complication of adenotonsillectomy , is caused by approximation of raw mucosal surfaces during the healing process. The mucosal trauma may have occurred intraoperatively as a result of denuding the nasal of the palate or inappropriate use of electrocautery , or it may develop postoperatively from local infection. Use of meticulous surgical technique is the key to minimizing this complication . Surgical repair is usually required after the scar has matured .

Eagle syndrome (ossification of the stylohyoid ligament) is an uncommon complication for which the pathophysiologic basis of its symptoms is poorly understood . Patients may present many months or years after tonsillectomy with facial pain or dysphagia . Surgical shortening of the styloid or division of the stylohyoid have been found successful treatment options.

Conclusion

Despite its simplicity , adenotonsillectomy has many possible complications . It is important to discuss the most common of these , namely , anesthesia risks , pain , otalgia , and bleeding , with patients caregivers . Severe complications are rare , and the benefits of adenotonsillectomy far outweigh the risk of development of uncommon problems .

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