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AIRWAY MANAGEMENT OF A CHILD FOR SCLEROTHERAPY OF A SUPRAGLOTTIC CYSTIC HYGROMA

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Description

A 7-year old male child with a congenital cystic hygroma over the right posterior auricular region extending to the ipsilateral parotid region and clavicle, who had undergone nine sittings of sclerotherapy under general anesthesia with laryngeal mask airway over the past 5 years for treatment of the mass in different areas of the head and neck region, presented with a recent extension of the mass to the supraglottic region with a decreased supraglottic chink. Hence the child was posted for sclerotherapy of the lesion involving the supraglottic area. Preoperative airway management, coordinated by anesthesiology and interventional radiology teams included an initial plan of laryngoscopy with a portable video-laryngoscope and stand-by paediatric surgical team with equipment ready to perform a surgical tracheostomy in case airway was unable to be secured using video-laryngoscopy or if the airway was at-risk of injury during subsequent attempts at intubation.

We initially induced general anesthesia with bag-and-mask ventilation using an Oxygen and 8% Sevoflurane mixture. The patient was easier to ventilate by bag-and-mask ventilation when we optimised position and turned his head to the right, allowing the mass to gravitate, and attempted a check video-laryngoscopy using the C-MAC after ensuring adequate depth of anaesthesia. The supraglottic mass was an oval markedly oedematous mass which nearly completely obscured the glottic view. External laryngeal manipulation allowed partial glottic view. The patient was intubated nasotracheally after neuromuscular blockade in right lateral decubitus position and external laryngeal manipulation using C-MAC video-laryngoscope. After endotracheal intubation, the patient was re-positioned for sclerotherapy. We made the patient lie supine and gave a gentle neck extension and elevation. Sclerotherapy instruments were directed at the lesion guided by video-laryngoscopic view. Procedure was uneventful. Patient was shifted intubated to the recovery room on sedation with Dexmedetomidine infusion. Sedation was stopped the following morning and he was extubated after satisfactory trial of spontaneous respiration.

Discussion

This case highlights the importance of anatomic and functional complications of cystic hygroma that must be considered for airway management [1]. Coordination between provider teams and preparation with emergency airway equipment such as an airway exchange catheter to railroad an endotracheal tube and standby surgical team with tracheostomy equipment are essential. Optimum positioning is important for management of such lesions as they portend to obstruct ventilation, and a team member for manual displacement of the tumour away from the airway during laryngoscopy is a valuable addition [2]. Since the mass in the supraglottic area had enlarged, we considered endotracheal intubation with a microcuffed tube to access the lesion for treatment,

prevent loss of airway, and for protection from aspiration. The lesion did not distort the anatomical landmarks for performing a surgical tracheostomy, which we considered as a last ditch approach [3].

References

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