Effect of adenotonsillectomy on pulmonary arterial blood pressure in children with adenotonsillar hypertrophy

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Chronic upper airway obstruction which becomes severe during sleep is gradually being recognized with increasing frequency. If unrequited and untreated, the eventual outcome in some patients is pulmonary hypertension and even heart failure.Adenotonsillar hypertrophy is the most common cause of chronic upper airway obstruction in children.The aim of this work was to determine the PASP in children with hypertrophied tonsils and adenoid and to clarify whether tonsillectomy and adenoidectomy has any effect on pulmonary arterial pressure of these children. Another aim of this study is to find out whether the complications of adenotonsillar hypertrophy are reversible or not and to estimate the time needed for reversibility.This study was carried out on thirty children with hypertrophied chronic adenotonsillitis causing chronic upper airway obstruction, they were subjected to:I) Preoperative evaluation:1- Complete history taking.2- General examination.3- Full -ENT examinations.4- Investigations:- Routine preoperative investigations.- Plain x ray on soft tissue neck (lateral view).- Chest x-ray (postero-anterior view).- Doppler echocardiography.II- Operation:Adenoidectomy, tonsillectomy or both were carried out for all children.III- Postoperative evaluation:1- Full general and E.N.T. examination.2- Cardiac cases were followed up by using echocardiography at intervals of one week and four months postoperativelyThe results of the study were as follow:- As regards plain x-ray soft tissue neck, it showed small adenoid in 6 cases (20%) and large adenoid in 24 cases (80%).- As regards chest x-ray it showed non of cases has any cardiomegaly.- As regards echocardiography, it showed pulmonary hypertension in 8 children (26.7%).Relief of upper airway obstruction was carried out by tonsillectomy, adenoidectomy or both.- Snoring and apnea were disappeared in nearly all cases.- Echocardiography showed improvement of pulmonary hypertension in 75% of cardiac cases one week postoperatively.By the fourth month, all cases were improved.from this study we conclude that adenotonsillar hypertrophy causes higher PASP in children and adenotonsillectomy is an effective therapeutic measure in such patients.