

Anatomical Variation of Pulmonary Venous Drainage and its Clinical Significance

Article by Haritha Mahalingham and Mounikabindu Bhatluru
MD Student, College of Medicine, Texila American University, Guyana, South America

Abstract

Background: Pulmonary veins anomaly consist of partial and total anomalous pulmonary venous connections. These are partial and total forms of pulmonary venous drainage into the systemic venous system. Partial Anomalous Pulmonary Venous connection account for 0.5% of the congenital cardiac defects and are commonly associated with atrial septal defects. Total Anomalous Pulmonary Venous connection accounts for 1-2% of all congenital cardiac malformations. Total anomalous pulmonary venous return (TAPVR) is a relatively uncommon congenital heart lesion which usually results in death during the first year of life.

Objective: To review the articles to evaluate the anomalous pulmonary veins, its abnormal drainage pattern and emphasize on its clinical importance.

Methods: Various related articles from different indexed journals were chosen from google scholar, and pubmed. Those articles were reviewed thoroughly and analysed.

Result: After reviewing most of the article we found that, when one or both of the left pulmonary veins drain into the systemic venous system, they usually do so by way of a left superior vena cava or directly into the coronary sinus. Anomalous veins from the right lung often occur without associated anomalous veins from the left lung, but the reverse is unusual and left sided anomalous pulmonary vein generally occur with complete transposition of all the pulmonary veins and an atrial septal defect.

Conclusion: Improvements on surgical techniques as well as preoperative and postoperative management account for the reduction in mortality. This review helps surgeons to avoid postoperative complications like arrhythmias and obstruction of the superior vena cava or pulmonary veins.

Keywords: Anomalous pulmonary vein drainage, congenital cardiac defect, atrial septal defects.