

Cadaveric Study of Lung Anatomy: A Surgical Overview

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Abstract : Introduction: A thorough knowledge of variations in lung anatomy is of prime significance during surgical procedures like lobectomy, pneumonectomy, and segmentectomy of lungs. The arrangement of structures in the lung hilum act as a guide in performing such procedures. The normal pattern of arrangement of hilar structures in the right lung is eparterial bronchus, pulmonary artery, hyperarterial bronchus and pulmonary veins from above downwards. In the left lung, it is pulmonary artery, principal bronchus and pulmonary vein from above downwards. The arrangement of hilar structures from anterior to posterior in both the lungs is pulmonary vein, pulmonary artery, and principal bronchus. The bronchial arteries are very small and usually the posterior most structures in the hilum of lungs. Aim: The present study aims at reporting the variations in hilar anatomy (arrangement and number) of lungs. Methodology: 75 adult formalin fixed cadaveric lungs from the department of Anatomy AIIMS New Delhi were observed for variations in the lobar anatomy. Arrangement of pulmonary hilar structures was meticulously observed, and any deviation in the pattern of presentation was recorded. Results: Among the 75 adult lung specimens observed 36 specimens were of right lung and the rest of left lung. Seven right lung specimens showed only 2 lobes with an oblique fissure dividing them and one left lung showed 3 lobes. The normal pattern of arrangement of hilar structures was seen in 22 right lungs and 23 left lungs. Rest of the lung specimens (14 right and 16 left) showed a varied pattern of arrangement of hilar structures. Some of them showed alterations in the sequence of arrangement of pulmonary artery, pulmonary veins, bronchus, and others in the number of these structures. Conclusion: Alterations in the pattern of arrangement of structures in the lung hilum are quite frequent. A compromise in knowledge of such variations will result in inadvertent complications like intraoperative bleeding during surgical procedures.

Keywords : fissures, hilum, lobes, pulmonary

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