

Stellingen behorende bij het proefschrift

Molecular and Structural Aspects of the Pulmonary Vasculature in Human Congenital Diaphragmatic Hernia, and Therapeutic Implications

S.M.K. Shehata 25 November 1999

1. Pulmonary vascular abnormalities in congenital diaphragmatic hernia consist of: decreased number of pulmonary arteries per unit lung volume, and peripheral muscularization of small arteries with medial and adventitial thickening. Geggel et al., *J Pediatr* 1985; 107:457-464.
2. Congenital diaphragmatic hernia is more than just a closing defect of the diaphragm. Annelies Brandsma, Thesis Erasmus University 1995.
3. Studies of the development of the pulmonary vasculature should be conducted in conjunction with studies of the development of airways and pulmonary alveolar parenchyma (this thesis).
4. Infants with lung hypoplasia in congenital diaphragmatic hernia born at 34-39 gestational weeks have a lung cell population comparable to that of a normal fetus at 20-22 weeks. Wigglesworth et al., *Arch Dis Child* 1981; 56:601-605.
5. A hypoplastic lung is not a small normal lung.
6. The increased vascular endothelial growth factor (VEGF) expression in small diameter and supernumerary pulmonary arteries in congenital diaphragmatic hernia patients complicated by pulmonary hypertension may reflect an apparently unsuccessful attempt by the developing fetus and neonate. The fetus tries to compensate for the stunted lung vessel growth and/or to stimulate arterial angiogenesis of the pulmonary pressure regulating arteries caused by a mechanism which remains to be identified (this thesis).
7. Altered pulmonary expression of NOS isoforms may play a role in the altered response of the pulmonary vasculature to inhaled nitric oxide and may point to a mechanism leading to the genesis of pulmonary hypertension (this thesis).
8. The clinically apparent beneficial effect of ECMO treatment on pulmonary vascular resistance of neonates with CDH may be related to adventitial thinning (this thesis).
9. The emergence of supernumerary pulmonary arteries in normal and hypoplastic lungs needs to be investigated in greater detail.

10. Clinical medicine is largely a matter of pattern recognition.
11. Case presentations in the medical Egyptian papyri, particularly the Edwin Smith papyrus, are very systematic and meticulous. Every report starts with "information regarding...." suggesting the history of the disease, then examination follows and starting with the words "if you examine a patient with...", then the physician states the prognosis of the disease by writing one of the following expressions: "I will fight", or "I will not treat", and finally treatment is described.
12. A thesis supervised by not just one, but three coaches, is not the outcome of the sum, but rather the outcome of the product of the four leading figures.
13. Let us learn the art of dreaming, with which we can reach the truth. F. August, French chemist, early 20th century.
14. Herodotus, the father of history, noted the practice of specialization among ancient Egyptian physicians, stating that "the art of medicine among them is distributed thus: each physician is a physician for one disease and no more, and the whole country is full of physicians".