# Variations in the diaphragmatic course of the azygos veins. Preliminary study

Katarzyna Rapalska, Małgorzata Szwabe, Małgorzata Grzymisławska, Mateusz Krajecki Department of Anatomy, Poznan University of Medical Sciences, Święcicki Street 6

## Introduction:

The azygos veins vary much in their mode of origin, course, tributaries, anastomoses and terminations.

In early embryos three systems of paired veins terminate in the sinus venosus 1) umbilical veins from the chorion;2) vitelline veins from the yolk sac, and 3) cardinal veins from the body of embryo. The azygos veins develop from the supracardinal veins and derivative of the postcardinal vein which forms the root of the azygos vein. Several factors are responsible for alterrations of the final asymmetrical venous plan, viz. 1) shifts of position and direction of flow; 2) anastomoses; 3) local transformation and 4) new formations.

# Material and methods:

Investigations were performed on 15 human cadavers. Azygos veins were dissected and their diaphragmatic course, anastomoses and tributaries were observed.

## **Results:**

Presented preliminary study showed that in 8 out of 15 dissected azygos veins they traverse the aortic hiatus as a common trunk or their roots.

1) in 2 cases the azygos vein passes through aortic hiatus;

2) in 2 cases root of the azygos vein (from ascending lumbar vein) enters the thorax through aortic hiatus;

3) in 3 cases root of the hemiazygos vein (from ascending lumbar vein) traverses aortic hiatus;

4) in 1 case both veins (azygos and hemiazygos) pass through aortic hiatus. In 7 cases the course of azygos veins is typical, through diaphragmatic crura. In 4 investigated cadavers 3 or 4 connections between azygos and hemiazygos veins were found.













#### a - aorta; av - azygos vein; hav - hemiazygos vein; e - esophagus; d - diaphragm