

Which organ develops first in the intrauterine life?

Hangi organ intrauterin yaşamda ilk olarak gelişmeye başlar?

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Studying on the intrauterine development period is very difficult and it requires special technologic equipments. The number of studies on fetal development has increased by the improvement of ultrasonography and Doppler techniques and so fetal development is well understood.

Mansur b. Muhammed b. Ahmed who lived in 14th century was a Turkish scientist and the writer of "Kitab-ı Teşhirü'l Ebdan Min e't Tıb" which was one of the three illustrated anatomy books of that time (Fig. 1). He also made the anatomical description of ventricular septal defects in his book before Henry L. Roger (1). Some of the resources claim that the writer was Persian because the book was written in Persian and Mansur b. Muhammed b. Ahmed lived in Shiraz. However if the book's literary language is analyzed it can clearly be understood that writer's native tongue was not Persian. Persian was used commonly as a scientific and literary language at that time. In addition, the drawings in the book are matching the samples with the ones in the Turkish culture (2).

The organ systems of the human body were defined in a detailed manner in "Kitab-ı Teşhirü'l Ebdan Min e't Tıb". Avicenna who lived in 11th century; was one of the famous physicians of his age; adduced that the first organ that fully develop in fetus is umbilicus. Moreover, Razi claimed that liver is the first organ developing in fetus. Hippocrates who is considered one of the most outstanding figures in the history of medicine said the first organ that develops in fetus is brain. Mansur b. Muhammed b. Ahmed denominated in his book that the first developing organ in fetus is heart.

It is clearly known that the cardiovascular system is the first organ system that reaches a functional state in fetal life. The

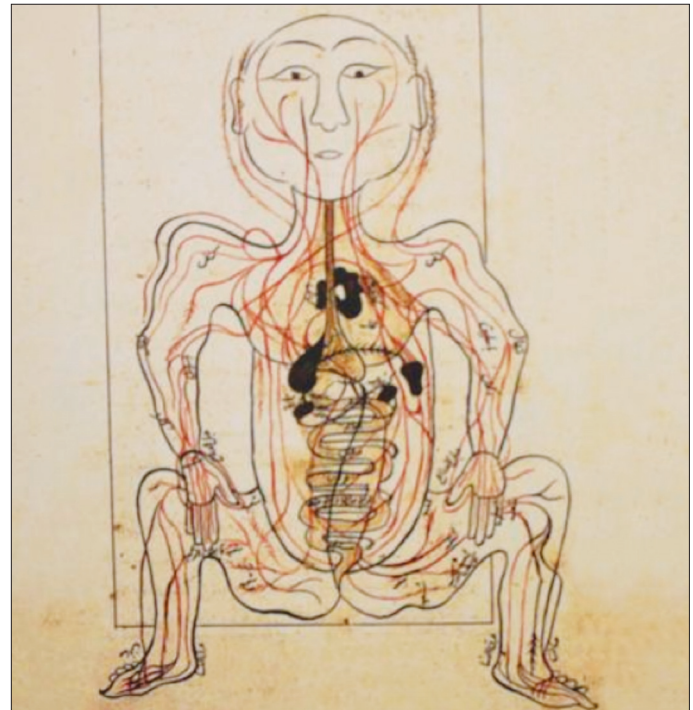


Figure 1. Vascular anatomy of a human being, which was drawn by Mansur b. Muhammed b. Ahmed

(Kahya E, Bilgen B. Kitab-ı Teşhirü'l-Ebdan Min e't-Tıb. Ankara: Atatürk Kultur Merkezi; 2008. yazar izni ile basılmıştır.)

heartbeats of embryo can be detected by Doppler in the 5th week and by ultrasonography in the 7th week of intrauterine growth (3).

Due to early development of placental circulation, cardiac primordium appears as a preliminary raw just in front of the head crinkle outside the embryo. The heart tube in the eleventh

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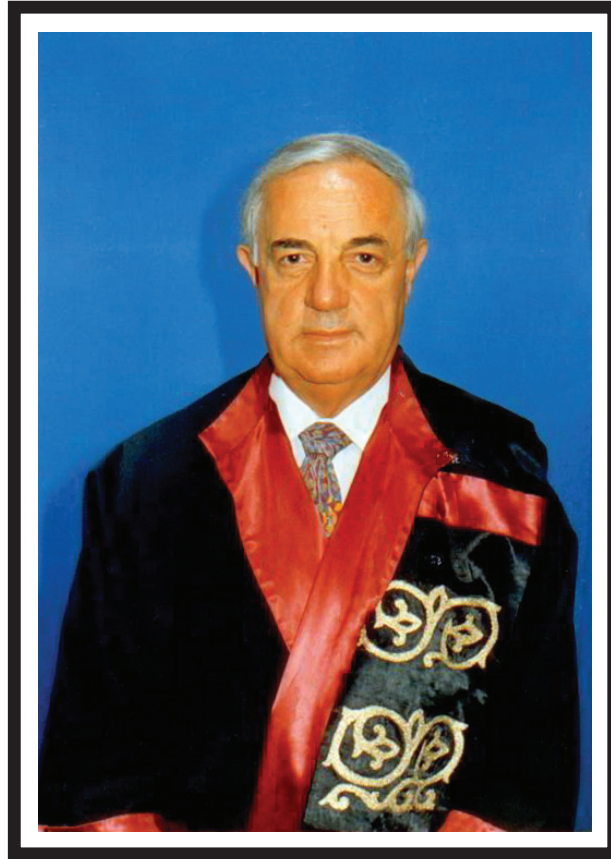
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stage is described with a three-dimensional computer model. This was defined as a "classic ventral view" in 1927 by Davis. However, it was changed in 1990 by the help of the studies done on the Mizuguti embryos based on the vascular pathways and their relations with the digestive tube by the help of computerized analysis (4).

In light of the foregoing, it is clear that Mansur b. Muhammed b. Ahmed is a Turkish scientist. The book he wrote and the predictions he made about fetal life show that he was a talented scientist beyond his age.

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