

Comparative anatomical study of great vessels in arabian fetal sheep by rhodopas cast, angiography and dissection techniques

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Abstract

Circulation in the fetus has some anatomical features which is of clinical importance. The present study was carried out to investigate the great vessels and duct in the circulatory system of fetal sheep by three techniques of rhodopas cast, angiography, and dissection techniques. Thirty-six male and female fetuses were studied. The age estimation of fetuses was calculated through Crown Rump Length (CRL) measurements and by use of formula for sheep fetus. All fetuses were divided in three groups; group 1 (CRL=12.54±0.52 Cm, Age= 62.08±2.08 days), group 2 (CRL=22±1.31 Cm, Age= 81.9± 5.7 days) and group 3 (CRL=34.6±1.19 Cm, Age= 108.5± 5.38 days), respectively. The structure of the umbilical cord, course of the umbilical vein and arteries, portal vein, ductus venosus, caudal vena cava, aorta, pulmonary trunk, ductus arteriosus, and great arteries and veins of the neck, thoracic and abdominal cavity were studied. The results showed, the vessels and duct of arabian fetal sheep are similar to other ruminants, but there were some differences in arrangement of umbilical cord and ductus venosus with equines, dromedary camel and human. Also the fetal sex and age had no effect on the arrangement of vessels and ducts. On the other hand, the results showed that all of the mentioned techniques are capable of assessing the blood vessels and ducts, but are complementary to each other.

Key words: Vessels, Rhodopas Cast, Angiography, Fetus, Sheep

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