

Histological Study on Prenatal Purkinje Fibres (PF) Development on Dromedary Camel

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ABSTRACT

The development of the Purkinje fibre (PF) of the camel foetus was studied in dromedary camel foetuses during the three gestational periods. A total of 30 hearts were used, the hearts were collected from Tamboul and Al-Salam slaughterhouses, Sudan. The samples were prepared by routine histological procedures and stained with H&E stain. In the first trimester PF were embedded in cardiac muscle fibres close to the ventricular endocardium. In second trimester, some of PF were embedded in the connective tissue, some of the fibres contained two nuclei. The striation was clear in peripheral parts of some fibres. At 178days of gestation (second trimester) most of fibres contained two nuclei and the cytoplasm around the nuclei was light. At the third trimester PF appeared as bundles of fibres parallel to myocardial muscles. They were also embedded in the endocardial connective tissue as groups or separate fibres. PF was embedded in the myocardium in the first trimester and either between the endocardium and myocardium or within the myocardium in the second and third trimesters. It was concluded that most of Purkinje fibres were not found in its normal location till the last stages of pregnancy, which means that PF continue their developmental changes after birth.

Keywords: *Purkinje fibre, Heart, development, dromedary camel*