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Objective We compared the similarity and difference of atrial artery distribution in dogs, sheep and pigs, to investigate the suitability of sheep and dogs, rather than pigs, as an animal model for experimenting on atrial arrhythmia in Muslim populated areas.

Method Distribution and diameter of atrial artery between 30 dogs, 30 sheep and 30 pigs were compared by coronary vascular corrosion casting technique. The opening of CAs were identified at the commencement of the ascending aorta.

Result (1) No significant difference in distribution and branching of the atrial arteries was documented in dogs, sheep and pigs;(2) The average distance of anterior atrial artery to the origin of RCA is 4.78 mm in dogs, 4.16 mm in sheep and 28.64 mm in pigs. The average distance of anterior atrial artery to the origin of LCx is 11.2 mm in dogs, 12.14 mm in sheep and 17.02 mm in pigs. The average distance of post-lateral branches to the origin of RCA is 35.52 mm in dogs, 51.74 mm in sheep and 57.28 mm in pigs, to the origin of LCx is 30.62 mm in dogs, 41.76 mm in pigs and 67.92 mm in sheep;(3) the average opening diameter of atrial artery ranged within 1.01-1.20 mm in pigs and sheep and 0.62-0.72 mm in dogs.

Conclusion The study showed that the distribution and branching of the atrial artery in the sheep and dog heart appeared about the same and similar to that of the pig. We concluded that both sheep and dog hearts could be used for experimenting on atrial arrhythmia in Muslim populated areas.

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COMPARISON OF ATRIAL ARTERY DISTRIBUTION AMONG DOGS, SHEEP AND PIGS BY CORONARY VASCULAR CORROSION CASTING

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