Atresia of the Ostium Atrioventriculare Dextrum in a Pig

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Atresia of the ostium atrioventriculare dextrum is the complete absence of the communication between the right atrium and the right ventricle. This anomaly, relatively rare in animals, is frequent both clinically and at autopsy in man [4]. It has not been reported previously in hogs. One case was found in Holland in a healthy slaughter pig (reg. no. 1672) in which inspection had revealed no abnormalities. The valve normally present in the ostium (right atrioventricular valve) was aplastic in this case.

The heart (fig. 1, 2) plus the trunk of the major vessels, after fixation in 4% formalin, weighed 520 g, 0.53% of the body weight. The left ventricle and left atrium dominated the external appearance. The pulmonary cone looked normal. The right auricle was slightly enlarged. Internal inspection revealed a ventral atrial septal defect (about 55 mm). The foramen ovale secundum was slitshaped (15 mm long, 3 mm wide). The ostium atrioventriculare dextrum was entirely absent. The ostium atrioventriculare sinistrum was wide (about 65 mm); with the valve and the papillary muscles, however, it looked normal. The left ventricle was dilatated and had a thick muscular wall. The aorta left the ventricle normally. In the ventricular septum just below the aortic semilunar valves there was a small round defect (about 10 mm), which comprised the communication to the slit-shaped right ventricle. There was no communication between the right ventricle and the right atrium. The supraventricular crest, the pulmonary cone and the pulmonary trunk showed no abnormalities and the remaining cardiac parts and structures also were normal. The severe cardiac anomaly in this case did not cause clinical signs of any significance. This may be attributed to the current method of housing and handling pigs for fattening, aimed at avoiding all effort by the animals. This does not apply to other animals, except for fattening calves.

Pathophysiological findings in animals with this kind of atresia are identical to those of animals with a monoventricle [3].

The circulation pattern resembles that of amphibia. The fact that many structures of this heart were normal and only a few abnormal suggests that the cardiac primordium was completely normal. The atresia of the ostium probably occurred during early growth, through hypoplasia and aplasia. Consequently, the development of the right ventricle was impaired.

The direct cause of this process is unknown. Theoretically, a fetal inflammation of the right

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Fig. 2: Photograph of dissected heart, from left (facies auricularis). Pulmonary cone and pulmonary trunk have been opened. Numbers as in fig. 1.
atrioventricular valve may have been the cause [2]. An intermediary stage of this process in a piglet has been described [1].

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References


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Spontaneous Intraductal Mammary Carcinoma in a Rhesus Monkey

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Relatively few spontaneous mammary gland neoplasms have been seen in non-human primates. Only 13 cases are recorded [2; H. W. Casey, personal communication, 1978]. Of these thirteen mammary neoplasms, six were in rhesus monkeys and the remainder in a variety of other species. The occurrence of mammary neoplasms in non-human primates is of interest because of the potential for comparative studies of the development and growth of these tumors.

Fig. 1: Gross appearance of first mammary mass.