

birth at term and one adult ewe in order to confirm the presence of intrahepatic shunts.

A catheter was placed in the branch of portal vein in the liver via the umbilical vein or the mesenteric vein in order to avoid the flow through the ductus venosus, and 17.5–100  $\mu$ c of  $^{131}\text{I}$ -MAA was injected via the catheter.

The animal was laid on its left side and the accumulation curve into the liver and lungs were obtained by the scintillation detectors over the liver and lung. Subsequently scintiscannings over the chest and abdomen

were performed by dot scanning, photoscanning and scinticamera.

Accumulation curves revealed the accumulation of  $^{131}\text{I}$ -MAA in the lung in 4 out of 5 cases within 24 hours after birth, in 2 out of 3 cases at one week of age and in none of 7 cases after 2 weeks at life.

The results by the both methods were in good accordance.

It was concluded that the intrahepatic shunts of larger than pulmonary capillary in diameter were present physiologically in the newborn lamb of less than one week of age.

## Hepatic Blood Flow after Deviding of Arteria Hepatica Communis

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Recently deviding of arteria coeliaca and of arteria hepatica communis except arteria duodenalis has been performed in our hospital as a method of radical operation for stomach cancer (Applby's method). After this procedure the blood flow to the liver should be altered and arteria gastroduodenalis from arteria mesentericae superior, arteria gastroduodenalis from arteria coeliaca and arteria hepatica propria supply blood for the liver. Alterations of the liver function and blood flow in the liver of the patients after this operation were observed.

In the most of the cases, the values of S-GOT and S-GPT increased rapidly after the operation. The maximum values were observed one or two days after the operation. Then, the values decreased gradually and returned to normal level within two or three weeks

after the operation. Liver scanning using  $^{131}\text{I}$  rose bengal and  $^{198}\text{Au}$  was performed. Generally, thin scintigram of the left leaf of the liver suggesting decrease of blood supply to this region was observed in the early period between three days and seven days after the operation. In the following period, the scintigram of the left leaf increased its density, and in the most of the cases, the liver scintigram became normal within ten weeks after the operation. In a couple of the cases, the scintigram did not show the normal density in spite of ten weeks after the operation, and suggested an alteration of blood flow of the hepatic arterias and the portal vein. We intend to follow up the further liver function and the blood flow in the liver of the patients for a long period of time after this operation.