INVESTIGATION OF ASCITES ULTRAFILTRATION AND REINFUSION IN THE ASCITIC DOG

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1. Using a hollow-fiber artificial kidney (FILTRYZER HF-1.0U; Toray Co. Ltd.), 2000 ml of ascites obtained from an experimental ascitic dog was packed into two bags, and each 1000 ml of ascites was ultrafiltered to 100 ml.

Ascites was rapidly ulterafiltered and concentrated and the apparatus resisted enough. Total protein concentrations, which were 2.1 and 2.5 g/dl in the beginning, were concentrated to between 15.3 and 16.9 g/dl. Electrolytes did not change so much.

2. Two experimental ascitic dogs, produced by posterior vena cava constriction in the thoracic cavity, were treated with intravenous and intraperitoneal reinfusion of their own ultrafiltered and concentrated ascitic fluid.

In this chapter, dogs were treated with three times of 1000ml of ascites ultrafiltration and reinfusion every other day, and it followed by three times of 2000 ml of ascites ultrafiltration and reinfusion every other day. As a result, the serum total protein concentration in the intravenous treatment, rose from 3.9 and 5.0 g/dl to 4.7 and 7.0 g/dl two days after the last treatment with 2000ml of ascites. With the intraperitoneal treatment, serum protein concentrations rose from 3.9 and 4.1 g/dl to 4.8 and 5.0 g/dl at two and seven days after of the last treatment with 2000 ml of ascites, respectively. The other items, CBC and components of serum, changed little and could not be connected with this treatment. Ascites reformation was prolonged after the treatment with 2000 ml of ascites with both intravenous and intraperitoneal reinfusion.

3. Six dogs with massive ascites, admitted to Hokkaido University Veterinary Hospital, were treated by ultrafiltration and intravenous or intraperitoneal reinfusion of their own ascitic fluid.

A total of 18 reinfusion treatments were carried out and this treatment was effective in four cases. The others did not respond to this treatment or to other therapy either. In all cases, there were no complications caused by this treatment.

In veterinary medicine, treatment with ultrafiltration and reinfusion of the animal's own ascitic fluid for intractable ascites or massive ascites in the dog is useful and safe in controlling tthe ascites, and is helpful in the treatment of the basic diseases.