FEMORAL FRACTURES IN SEVERE HEMOPHILIA. J.P. Allain, M.H. Ageron, Y. Laurian and J.Y. De La Caffinière. French Red Cross, La Queue les Yvelines, France.

Increasing physical activity of hemophilic children has resulted in more frequent fractures. Within the last ten years, fourteen severe hemophiliacs (8-19 years) sustained femoral fractures. Four of these hemophiliacs had an correlation in these eight cases with prolonged immobilisation and/or treatment with steroids. Co-existing knee hemarthrosis or thigh hematoma often led to a delay in the diagnosis of the fracture. Metaphyseal fractures (8 cases) were treated by plaster cast (4) or, skin or pin traction (4) with good anatomical result and normal union. Replacement therapy was given in 3 cases for 3 days and in 1 case for 2 weeks. No complication occurred in any of the non transfused patients (4). Epiphyseal and femoral shaft fractures were treated by skin or pin traction (3) or internal plate fixation (2) associated with replacement therapy for at least 2 weeks. Unsatisfactory anatomical result was obtained in three cases. One impacted fractured neck of femur was discovered on X-ray examination 3 weeks after trauma. Guide lines for orthopedic and medical treatment of femoral fractures in hemophiliacs are suggested according to the anatomical feature.

THE USE OF ULTRASONOGRAPHY IN THE MANAGEMENT OF HAEMOPHILIA. B.A. McVerry,** Jennifer Voke,* F.R. Vicary** and Katharine Dormandy* The Royal Free* and University College** Hospitals, London.

Four patients, three with factor VIII antibodies and one with von Willebrand's disease, are described, in whom ultrasonic scanning was useful in the diagnosis as well as in locating and assessing the size of bleeding into a hidden area. In this technique, the recorded pattern of reflected waves indicates an unusual space occupying lesion by the presence of a transonic area. In haemophiliacs who do not have antibodies, this technique is only of limited value since they respond readily to the infusion of factor VIII or IX and therefore do not require further investigation. In less straightforward cases such as the four reported, ultrasound proved a useful diagnostic tool. In each of these, a space occupying lesion was clearly demonstrated. Three of the patients had retroperitoneal haemorrhages and one an intramuscular haematoma. In the second patient, the results of the scan actually led to the haematological investigations on which the diagnosis of spontaneous factor VIII antibody was based.

ARTERIO-VEINUS FISTULA TO FACILITATE SELF TRANSFUSION FOR THE HEMOPHILIAC. M.W. Hilgartner and W.T. Stubenbord. Department of Surgery and Pediatrics, New York Hospital-Cornell Medical Center, New York, New York, U.S.A.

The veins of many multiply transfused older hemophiliacs have been destroyed through misuse making self transfusion extremely impossible and transfusion by trained personnel difficult. To improve the superficial veins in the forearm 4 arterio-venous fistulae were performed in 3 of 125 patients in the Hemophilia Clinic of the New York Hospital-Cornell Medical Center. In 2/3 a modified Brescia procedure was done in the forearm and anti-cubital fossa. The fistulae matured in 3 weeks to 2 months producing sufficient venous hypertrophy which allowed the patient to be trained for and successfully carry out self transfusion. The only complication has been occlusion of the fistula through pressure. This procedure should be considered before veins are destroyed and frequent hemorrhage in the forearm and elbow produce thickening of the skin, superficial tissues with limited movement of the wrist and elbow and complicate the surgery. The outcome of the procedure with freedom for the patient from medical personnel outweighs the additional surgical procedure in patients with hemophilia.