confidence, intrauterine death before 34 weeks gestation; 30 of these 84 fetuses were not transfused and 18 were liveborn (gest. age 34 weeks, SD 1.9,) of whom 9 (30 %) survived. We transfused 54 infants in utero (IUT) on 96 occasions. Of these, 25 had marked ascites at the time of transfusion: 13 died in utero, within 48 h of the procedure; 11 were born alive (gest. age 32.2 weeks, SD 2.1), were hydropic and died of the respiratory distress syndrome (RDS) in the neonatal period; 1 (4 %) was not hydropic at birth and survived. 29 did not have ascites at the time of transfusion: 13 died in utero, 12 within 48 h of the procedure; 6 were borne alive (gest. age 33 weeks; SD 1.3) and were hydropic, of whom 4 survived and 2 died with RDS; 10 were born alive (gest. age 34.6 weeks, SD 1.6) without hydrops, 1 died with RDS and 9 survived (45 %). We conclude that serial spectrophotometric analysis of amniotic fluid is required to adequately establish the need for IUT since single or paired analyses may be misleading, and that an intrauterine transfusion, particularly in an infant with ascites or performed earlier than 26 weeks gestation carriers a high mortality. (Supported by USPHS Grant HE-06285) (APS)

61 *Quantitative Aspects of Sensitivity in Allergic Children.* CHARLES D. MAY, JANE CHENG* and MARGARET LYMAN*, New York Univ. School of Medicine, New York, N.Y.

Procedures were devised for quantitative chemical assay of histamine released by antigens from leukocytes separated from a 10-ml sample of blood. Nine concentrations of antigen can be utilized in each examination to find the amount required for maximum release of histamine or dose response. Studies have been conducted with a variety of antigens for comparison with clinical manifestations and wheal and flare dermal reactions to the antigens. Also the procedures have been employed to measure the capacity of the sera of sensitive persons to inhibit histamine release with specific antigens (presumably by antibodies) and to follow fluctuations in this capacity and in the sensitivity of leukocytes during injection therapy with antigenic extracts. Data have been accumulated from study of over 100 children, including 30 receiving injection therapy. Histamine is released from leukocytes of sensitive subjects by antigens specifically, in agreement with wheal and flare dermal reactions, and the leukocytes of normal non-allergic individuals are unaffected. Sera of normal persons enhance histamine release but the sera of allergic children inhibit histamine release by the antigens specifically involved. During injection therapy the sensitivity of leukocytes to release of histamine by antigen and the capacity of the patient's serum to inhibit histamine release may vary independently. The net effects are ascertained by determining the amounts of antigen required for release of 50 % of the total histamine in the cells in the presence of the subject's serum in contrast to normal serum. This comparison affords an objective index of any influence of injection therapy on sensitivity, and an objective means of grouping patients by immunochemical response before undertaking clinical appraisals. (APS)

62 *Hereditary Splenic Hypoplasia.* SHERWIN V. KEVY*, MELVIN TEFFT*, GORDON VAWTER* and FRED S. ROSEN, Children's Hosp. Med. Ctr. and Harvard Med. Sch., Boston, Mass.

The one boy and two of three girls in a consanguineous kindred have exhibited undue susceptibility to invasive infections with *Hemophilus influenzae* and pneumococci. One of the affected siblings died of overwhelming *H. influenzae* type B sepsis and was found at autopsy to have a minute spleen. No other anatomic abnormalities were present. The two affected live siblings were each shown to have no demonstrable splenic tissue by scintillation scanning of the abdomen following intravenous injection of colloidal Au^{198}. Normal splenic tissue was demonstrable in both parents by this technique. Examination of the peripheral blood of affected offspring revealed the presence of Heinz and Howell-Jolly bodies. The antibody response to subcutaneous injection of tetanus and diphtheria toxoids and typhoid bacilli was normal. Their red cell survival and response to intravenous particulate antigens are under investigation and the results will be reported. (SPR)

63 *Sex Linked Recessive Hereditary Thrombocytopenia with Immune Globulin Abnormalities. A Form of Wiskott-Aldrich Syndrome?* LUIS CANALES and ALVIN M. MAUER, Dept. of Pediat., Univ. of Cincinnati, Ohio

A family was studied in whom hereditary sex-linked recessive thrombocytopenia was associated with immunologic abnormalities suggestive of relationship to Wiskott-Aldrich syndrome. Twenty-one male and 10 female members of 4 generations were included and 7 thrombocytopenic males found in a sex-linked recessive pattern of inheritance. Platelet counts in affected males ranged from 8,000 to 57,000/mm^3. Bleeding symptoms were mild except in one where recurrent epistaxis led to splenectomy at age 17 years. There was no history of eczema or increased susceptibility to infection. In 5 affected members studied isohemagglutinins were either absent or significantly decreased in titer. On immunoglobulin quantitation, increased levels of IgA were found in 4 of 5. IgM and IgG levels were normal in all. In one affected male, lymphocyte response to phytohemagglutinin was tested and found normal. All unaffected members, including carrier females, had normal platelet counts, isohemagglutinins and immunoglobulins. The absence of significant clinical history of infection or eczema may not preclude the diagnosis of Wiskott-Aldrich syndrome. The finding of detectable isohemagglutinin levels in 2 and normal IgA levels in one affected males indicates variability of severity within the family. All patients suspected of having sex-linked recessive thrombocytopenia should be studied for coexistent immunoglobulin defect. (SPR)

64 *Serum α-Fetoprotein Synthesis in the Human and Rat Fetus and its Inhibition in the Rat.* DAVID GITLIN and MARY BOESMAN*, Univ. of Pittsburgh Sch. of Med., Pittsburgh, Pa.

The serum of the human conceptus contains α-fetoprotein, a protein not found in the serum of the pregnant woman. Concentrations of α-fetoprotein may be low in infants born after premature spontaeous labor, suggesting that fetal synthesis of the protein in these instances is inhibited some days or weeks prior to the actual onset of labor. In the present study, selected tissues from human embryos of 6 to 9 weeks' gestation and from rat fetuses of 15 days' gestation were incubated with C^{14}-amino acids. Immunoelectrophoresis of the culture fluid followed by autoradiography revealed that α-fotoprotein was synthesized in human liver, rat liver and rat yolk sac, but not in any of the other tissues examined; human yolk sac was not studied. Serum