17 PLACENTAL TRANSFUSION IN NATURALLY BORN PIGLETS.

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lood volume and its components (125-I-albumin, 51-Cr-RBCs) were easured in 195 vaginally delivered piglets immediately after ord severage. Spontaneous cord-rupture studied in 118 normal iglets took place during delivery or within 190 s of birth. The ncrement in red cell mass (RCM) during this time (Table) relects a placental transfusion of 60% of fetal blood volume.

Group		Cord-rupture	RCM (ml/kg)	Hematocrit
ULL-TERM: normal	25	prenatal	23.6 ± 4.6	0.386 ± 0.034
normal	17	120-190 s	38.4 ± 7.0	0.411 ± 0.040
"runts" (< 800 g)	11	< 5 s	35.8 ± 11.2	0.431 ± 0.047
metabolic acidosis	13	<0-180 s	35.8 ± 6.7	0.439 ± 0.030
cord entanglement	5	prenatal	20.0 ± 3.6	0.411 ± 0.035
acute intra-partum	5	prenatal	24.3 ± 4.9	0.425 ± 0.042
asphyxia	4	60 s	23.0 ± 3.3	0.417 ± 0.031
REMATURE: ovarectomy	23	<5 s	22.1 ± 3.0	0.358 ± 0.030
prostaglandin-F2	18	<5 s	18.9 ± 3.4	0.310 ± 0.026

CM was significantly increased in the "runts" and in the piglets ith metabolic acidosis (base excess below -10 mmol/l)compared to he normal piglets. This may be explained by increased erythroiesis and prenatal placental transfusion, respectively. The iglets with acute intra-partum asphyxia which cords were severed 0 s after birth were deprived of placental transfusion, possibly s a result of vasoconstriction. The low RCM in the premature iglets with prostaglandin-induced deliveries indicates fetal oss of blood to the placenta.

18 ALPHA-THALASSEMIA INCIDENCE IN TURKEY.

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Starch gel (both at pH 8.6 and pH 7) and agar gel pH 6.45) hemoglobin electrophoresis were carried out n the cord blood of 1100 full term babies. Trace mounts (not measurable column chromatography) of art's hemoglobin was shown in 795 (72.3 %) of the pecimens; it was found to be more than trace (2 to .8 %) in 15 (1.36 %) babies. Trace amount of Hb A_2 as also shown by starch gel electrophoresis in 10 ord bloods with trace Hb Bart's. In two cases with nencephaly Hb A_2 was found to be elevated (2.8 and .3 % respectively).

Although cord hemoglobin levels were found insignificantly decreased, the MCV and MC Hb values of the abies with elevated Bart's were found to be signifiantly lower than those of the babies without or with race Bart's. The follow-up studies, and the hematoloical evaluation of their parents will be given in deail.

19 DIAGNOSIS OF MALIGNANCIES BY IMMUNOLOGICAL TECHNIQUES.

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Immunologic tests for the specific detection of tuor antigens would provide a method for the early deection of malignancy. Using immunodiffusion and immuofluorescent techniques, it is possible to measure ntigenic markers. Carcinoembryonic antigen and alpha$_1$ etoprotein are helpful in following treatment and prognosis of a patient. A new method for detecting prostate cancer employs counter-immunoelectrophoresis. Complement fixation studies have revealed antibodies o sarcoma specific antigens. The study of leukemia ssociated antigens with their surface receptors and nzyme markers form a basis for future immunotherapy ith this disease. Using radiolabelled antibodies to EA, the detection of diverse cancers has been made by external photoscanning. Precipitation tests and immunofluorescent tests have been used to detect melanoma, brain tumors and ovarian malignancies.

Skin tests and other tests (T E Rosette, PHA lymphocyte transformation test, macrophage inhibition test) for cellular immunity help to measure the immune competence of the cancer patient.

20 SURFACE MARKERS OF CEREBROSPINAL FLUID LYMPHOCYTES FROM ACUTE LYMPHOBLASTIC LEUKEMIA.

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Studies on CSF lymphocyte markers demonstrated normally a high percentage of E-rosette forming cells (90 %). By a microtechnique the relative proportion of T, B and null CSF cells was evaluated in two groups of children with ALL. As CNS prophylaxis patients of the first group received i.t. MTX during induction, cytosine arabinoside during consolidation and MTX every two months for three years as maintenance. Children of the second group received X-ray during induction and consolidation (total dose 2400 rads). Patients were in complete remission from 24 to 32 months for the first group and from 11 to 17 months for the second one. Results showed that the lymphocytes from CSF of the first group had a much lower percentage of T and T gamma cells in comparison to the second group; B cells were virtually absent, null cells were abnormally high in the first group. CSF cells of patients immediately after treatment with TCT demonstrated a high percentage of T cells. The lack of T cells in the group of children treated three years with i.t. MTX seems to cause such an immunological damage to discourage from this type of CNS prophylaxis.

21 HIGH DOSE METOTREXATE IN ACUTE LYMPHOCYTIC LEUKEMIA IN CHILDHOOD

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Three courses of metotrexate, 500 mg/sq.m. at 3 - weekly intervals, has been used as part of a consolidation therapy in Norway during the last four years to 110 children with acute lymphocytic leukemia. One child died following HDM. Postmortem examination showed that she was not in complete remission at the time.

Sixty-eight of eighty-one children (84%) in 1st remission have been in substained primary remission for 4 to 54 months. Five of the children died from infections 1-2 years after induction therapy. Therapy has been discontinued in 19 patients so far, none of them have relapsed.

There has been two cases of CNS-leukemia among the 81 cases in 1st remission, and no recorded case of testicular involvement so far.

22 300 CASES OF ACUTE GRANULOCYTE LEUKEMIA IN CHILDREN.

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In 20 years we gathered 239 acute myeloblastic leukemias (AML), 26 promyelocytic (APLM) and 35 monoblastic (AMoL). During the same period 1300 acute lymphoid leukemias (ALL) were treated. The peak of frequency between 3 and 8 noticed in ALL is absent in granulocytic leukemias. AML.The remission rate is 54 % (33 % in adults). The higher the WBC, the worse the results. With recent protocols combining daunomycin (DNR) and aracytine the rate reaches 75 % (48 % in protocols without DNR). The survival curve in similar in adults and children with a median of 7 months. Survival is shortened by a high initial WBC or a large splenomegaly. Only 3 % of the patients are alive after 4 years. First relapse occurs mostly in bone marrow, unusually isolated in meninges (7 %). A second short remission is possible in 43 % of the cases. APML.With protocols using DNR and heparin the remission rate is 75 % with a median survival of 16 months. There is no meningeal relapses.AMoL. The remission rate is 77 % with rubidazone, 21 % without. The median survival is 6 months and the frequency of initial or secondary meningeal involvement justifies cranial X ray prevention.