reticulosarcoma have succumbed despite regression of the tumours. In the patient affected with Ewing's tumour asaline gave a transient effect, and growth of the tumour has recurred even during the administration of the drug.

Asaline was well tolerated by the patients. No depressing effect on haemopoiesis was noted. The

Results of Treatment

Kind of Tumour	No. of Patients	Effect on Tumour	
		Yes	No
Metastases of seminoma of testis	4	3	1
Reticulosarcoma	2	2	—
Ewing bone tumour	2	1	1
Myelomatosis	4	4	—
Plasmocytoma	1	1	—
Cancer of stomach	2	—	2
Squamous-celled cancer of buccal mucosa	1	—	1
Cancer of uterine cervix	1	—	1
Metastases of osteosarcoma	1	—	1
Hodgkin's disease	1	—	1
Total	19	11	8

leucocyte count, though frequently remaining unchanged, was somewhat decreased in some patients. Side-effects have not been noted in the gastro-intestinal tract.

The effect of asaline on certain sarcolysin-sensitive tumours has thus been demonstrated, but clinical data are too scanty as yet to permit a complete comparison of the action spectra of each drug. Nor do they suffice to establish whether asaline has any advantage over sarcolysin. It will be noted, however, in favour of asaline, that this drug does not cause any apparent inhibition of haemopoiesis, so that it may be used in patients with leucopenia.

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"The hardest blows to marriages are given by 'personal defects,' a term which includes things like egoism, financial irresponsibility, immaturity, low intelligence, negligence, badness, etc. Nearly half the cases dealt with by the council come into this category. Then come sex difficulties (31%), health (22%), influence of in-laws (20%), and finally infidelity and incompatibility. Lack of money is one of the less important reasons, accounting for about 6%. At the Marriage Guidance Council they think marriage has a difficult future, especially in England. The independence of women has deprived the father of his authority, and the family has not yet adjusted itself to the new order. 'In Italy,' said Mr. Brayshaw, the general director, 'the throne is still occupied by the father; in the United States it is occupied by the mother, but here there are two thrones, one for the husband and one for the wife, and the equilibrium is very often unstable.'" (*Marriage Guidance*, December, 1959.)

Medical Memoranda

Case of Immune Aplastic Haemolytic Anaemia with Thrombocytopenia

The following case is worth recording in view of the importance of the recognition of the immune mechanism involved and its therapeutic implications.

For some time there has been speculation about the relationship between erythroblastic aplasia and antigen-antibody reactions (Smith, 1949, 1953; Rohr, 1952; Loeb, Moore, and Dubach, 1953; Gasser, 1957). Gasser summarizes the pathogenesis involved by saying that, whereas in the usual haemolytic anaemia the mature erythrocytes are destroyed and the reticulocytes in the blood as well as the erythroblasts in the bone marrow are in excess, on rare occasions the immune antibodies destroy the erythroid series in the bone marrow as well as the mature erythrocytes and reticulocytes in the peripheral blood. This is the so-called immune aplastic haemolytic anaemia, and was seen at certain times in the case described below. If the immune antibodies destroy erythrocytes and reticulocytes but leave the erythropoietic elements of the bone marrow intact, the peripheral blood findings suggest an aplastic anaemia but the marrow shows erythroid hyperplasia. Gasser calls this "immune pseudoaplastic haemolytic anaemia," and it was also seen at certain times in our case.

Bonham-Carter *et al.* (1954) reported the first case of an immune type of aplastic anaemia. This occurred in a 9-year-old boy whose anaemia was associated with severe thrombocytopenia. Splenectomy, by its beneficial effect on the platelet level, was life-saving. At present he is being maintained on a high critical dosage of prednisolone. He has iatrogenic Cushing's syndrome, but if the dose of prednisolone is reduced, haemolysis occurs and there is a rapid fall in haemoglobin. The infant in the following case had an immune type of aplastic anaemia associated with thrombocytopenia similar to that described by Bonham-Carter *et al.* The anaemia and thrombocytopenia could not be controlled by the use of prednisone; splenectomy, however, was of the very greatest value.

CASE REPORT

The patient, a female infant, was born on December 12, 1956, after a normal pregnancy. There was no evidence of ABO blood-group or rhesus incompatibility between mother and child, and the infant was not jaundiced in the neonatal period. There was no family history of anaemia, jaundice, or bleeding tendency; the only sibling is perfectly healthy.

The baby was thought by the mother to be pale in the neonatal period, and at 2 months of age some lesions resembling infantile eczema appeared behind the neck, on the ears, and behind the knees. Shortly afterwards she began having small, frequent nose bleeds; at 3 months purpura appeared for the first time, accompanied by increasing pallor, refusal of feeds, and listlessness.

She was admitted to hospital on June 24, 1957, looking very pale, covered with discrete pin-points of purpura, and with weeping areas of "infantile eczema." There was no enlargement of lymph nodes and the spleen was not felt. Investigations before treatment showed: Hb, 26% (3.85 g.); R.B.C., 1,000,000/c.mm.; W.B.C., 22,000/c.mm.; platelets, 30,000/c.mm., blood group O, Rh positive; bleeding time, more than 10 minutes; Schumm's test for methaemalbumin,

positive; Coombs test direct and indirect, negative; bone marrow, erythroid hyperplasia; other elements normal; megakaryocytes present.

In view of the anaemia and methaemalbumin in the plasma, it was assumed that haemolysis had occurred, but the cause was not apparent. On July 17 the direct Coombs test became positive and complete absence of reticulocytes in the peripheral blood was observed. The accompanying chart shows the child's progress over 13 months. Erythropoiesis varied from hyperplasia to virtual aplasia independently of the level of steroid administration. Although there were transitory reticulocytoses and increased numbers of platelets, frequent transfusions were necessary until splenectomy on January 1, 1958; since then no transfusion has been required and haemoglobin and platelets are maintained at normal levels on a daily dosage of 5 mg. of prednisone.

COMMENT

The blood picture six weeks after hospital admission, showing an acute haemolytic process with positive Coombs test, absent reticulocytes in the peripheral blood, and marrow hypoplasia, led us to believe that an antibody was destroying the erythrocytes and their marrow precursors. One marrow biopsy showed only 1% of erythroblasts present. A month before splenectomy, however, hyperplasia of the erythroid series was again seen, the M:E ratio being 1.5:1.

The coexistence of marked thrombocytopenia suggested an immune mechanism for this also, but no platelet antibodies were detectable. The results of

splenectomy in children with auto-immune haemolytic disease are unpredictable, and Gasser (1957) recommends that splenectomy be reserved only for those cases which cannot be successfully managed with hormonal therapy. In the case described by Bonham-Carter *et al.*, splenectomy was life-saving, but a high dose of prednisolone has proved necessary to prevent haemolysis. In the above case splenectomy was also of extreme value and control was possible with small doses of prednisone, without the inconvenience of an iatrogenic Cushing's syndrome.

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