enough to cause characteristic signs of poisoning and profound disturbances of cellular oxidation-phosphorylation processes. Low D.N.C. dosage did not appear to potentiate high thiopentone dosage, whereas high D.N.C. dosage did appear to potentiate even quite low thiopentone dosage. The distribution of characteristic deaths due to D.N.C. was fairly equal in the D.N.C.-barbiturate and D.N.C. control groups, the implication being that, although high D.N.C. dosage potentiated the effects of all but one of the barbiturates tested, the barbiturates did not under these conditions potentiate or mitigate the toxicity of D.N.C.

We have been unable to find any instances in the published literature of severe D.N.C.-poisoning in humans being treated by sedation by barbiturate drugs, although in their report on a case of severe but non-fatal D.N.C.-intoxication Pollard and Filbee (1951) refer to sedation as part of the treatment adopted. During the past three years no cases of fatal or serious D.N.C.-poisoning have occurred in this country, so perhaps the therapeutic problem of D.N.C.-barbiturate synergism has not yet occurred in practice. It is worth noting, however, that D.N.P. itself still has some industrial use in the chemical and explosives industries, and that Brody and Bain also found that chlortetracycline ("aureomycin"), thyroxine, and methadone have considerable dissociating properties *in vitro*.

Summary

A series of experiments using rats has shown that in the presence of sufficiently high dosages of dinitro-*o*-cresol to cause characteristic D.N.C.-poisoning five of the six barbiturates tested were significantly potentiated in the rapidity of onset, depth, and duration of their narcotic effects.

The action of the two thiobarbiturates tested—thiopentone and thialbarbitone—was potentiated so that normally non-fatal anaesthetizing doses led to almost immediate cyanosis and death. Of the oxygen barbiturates, pentobarbitone, amylobarbitone, and phenobarbitone were markedly potentiated by D.N.C., but hexobarbitone did not appear to be significantly influenced.

Barbiturate potentiation by D.N.C. appeared to require the presence of high D.N.C. dosages. Low dosages, causing no obvious D.N.C.-poisoning, did not appear to increase barbiturate narcosis.

It is strongly recommended that barbiturate drugs, especially thiobarbiturates, should not be used for the induction of surgical anaesthesia in a person suffering from D.N.C.-poisoning, and that barbiturate sedation in such cases should be carried out with comparatively small dosages, in anticipation of a possibly enhanced effect due to the synergistic action of D.N.C. and the barbiturates on cellular respiration.

We are grateful to Dr. J. M. Barnes for drawing our attention to this subject, and for advice during the investigation.

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Blood donations to hospitals in England and Wales through the National Blood Transfusion Service in 1954 were more than ever before: 700,202, compared with 659,674 in 1953 and 669,000 in 1944, the year in which D Day fell. Last year 104,161 people gave their blood for the first time, and by the end of December the total strength of the donors' panel was 540,389, an increase of nearly 25,000 compared with 1953. To ensure that no one need be asked to give blood more than twice a year the National Blood Transfusion Service needs 650,000 regular donors.

Medical Memorandum

Thrombocytopenic Purpura during Chloramphenicol Therapy

Much has been written about the occurrence of blood dyscrasias during chloramphenicol therapy. Aplastic anaemia is the commonest finding, but agranulocytosis also occurs. Hodgkinson (1954) collected 31 cases of poisoning by chloramphenicol; 28 were cases of aplastic anaemia, while three had granulocytopenia with a normal erythrocyte count. He recommended that the maximum dosage of chloramphenicol administered to a child should be 100 mg. per kg. body weight daily for seven days.

Purpura has frequently been the first sign of a toxic reaction. In all reported cases such a purpura has been shown to be a manifestation of aplastic anaemia. Often the platelets have been greatly reduced: Wilson *et al.* (1952) recorded 9,000 platelets per c.mm., but such low figures have always been accompanied by a fall in both erythrocytes and granulocytes. A slight fall in platelets has been reported accompanying granulocytopenia without anaemia (Hodgkinson, 1954), but there seems to be no previous record of thrombocytopenic purpura as the sole manifestation of chloramphenicol poisoning.

CASE REPORT

A boy aged 5 was seen by his doctor on account of cough. A week after the onset of the disease whooping and vomiting began, and he coughed up a little blood. His doctor made a diagnosis of whooping-cough, and prescribed chloramphenicol palmitate, 60 minims (3.6 ml.) t.d.s. When he had received a total of 2 fl. oz. (57 ml.) of this (2 g. of chloramphenicol) he developed a widespread purpura. He was then admitted to Plaistow Hospital, a fortnight after the onset of his cough.

On admission there were ecchymoses on the limbs, trunk, palate, and alveoli, and inside the right cheek. He also had bilateral subconjunctival haemorrhages. The lungs showed no abnormal physical signs. There was a slight tachycardia, with occasional extrasystoles. The spleen and liver were not palpable. The temperature was 101.2° F. (38.4° C.). The haemoglobin was 95%. The white blood cells numbered 13,500 per c.mm. (32% polymorphs, 64% lymphocytes, and 4% monocytes). The platelets numbered 5,000 per c.mm., and the bleeding-time exceeded ten minutes.

Treatment with chloramphenicol was discontinued, and crystalline penicillin, 500,000 units, was injected eight-hourly. The platelets rapidly rose in number. On the day following admission there were 83,000 platelets per c.mm., and only a few fresh purpuric spots were found. On the 13th day after admission the platelets numbered 203,000 per c.mm., and the purpuric lesions had all healed. The cough also had disappeared. On the 20th day the platelets numbered 230,000 per c.mm. The liver and spleen were not palpable at any stage. The patient was then discharged, the white blood cells numbering 14,800 per c.mm. (40% polymorphs, 60% lymphocytes).

COMMENT

The interest of this case arises from two facts. Firstly, a severe but transient thrombocytopenia occurred during treatment with chloramphenicol, with no fall in the haemoglobin or granulocytes. Secondly, this toxic manifestation occurred after only 2 g. of chloramphenicol had been given to a child of 5 years, spread over five days. This is about a seventh of the maximum dosage recommended by Hodgkinson (1954).

My thanks are due to Dr. R. W. Tannahill, physician in infectious diseases to Plaistow Hospital, for permission to publish this case.

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