ABSTRACTS

(This section of the Journal is devoted to selected abstracts of articles on social medicine appearing in the current literature. It is published in collaboration with the two abstracting Journals, Abstracts of World Medicine, and Abstracts of Surgery, Obstetrics, and Gynaecology.)


This is a painstaking, accurate, and complete corroborative of the generally accepted statement that it is normal for Africans to harbour several different parasites, to be relatively undernourished, and to be anaemic. The village chosen contained 225 inhabitants and was more healthily situated than many; there was no serious poverty, though most of the tenants were in debt to the African landlord. The average height, weight, and blood count was below the standard for Great Britain, and the erythrocyte sedimentation rate was consistently above normal. The spleen rate was 45-5 per cent. and the incidence of worm infestation varied from 9-1 per cent. for Schistosoma haematobium to 75 per cent. for Ascaris lumbricoides. Hepatomegaly was noted in about one-third and attributed partly to malnutrition, for protein lack seemed evident. About 75 per cent. had signs of active or quiescent yaws, and figures are given of the incidence of other diseases.

[The whole picture shows how far the application of scientific knowledge lags behind its acquisition and is a challenge, especially, to educated Africans.]

Clement Chesterman


The male death rates from tetanus during 1940 to 1948 were about half those recorded between 1931 and 1940, while the female rates declined very slightly. During the period 1928 to 1947, in each sex the mortality was highest during infancy and childhood, lowest during middle life, rising again after 50, especially among males, in whom the mortality rates at all ages were much higher than those in the female. In infants, the majority of deaths occurred under the age of one month, males again predominating. The highest rates in England and Wales occurred consistently in the East and South-west regions, probably due to the high rural population in these areas. Wartime experience has clearly shown the efficiency and safety of active immunization against tetanus. The impracticability of similar active immunization of the civilian population is realized, but it is suggested that immunization of children at the age of entry to school, especially in rural districts, is both feasible and desirable.

J. L. Markson


In this second part of their report on the Ministry of Health's hospital inquiry into the incidence of poliomyelitis during 1949, the authors summarize the information obtained concerning the effect of pregnancy, tonsillectomy, and cross-infection in hospital, on the spread of the disease.

The case fatality among pregnant women suffering from poliomyelitis (69 cases) was 20.3 per cent., while that among women of child-bearing age who were not pregnant (668 cases) was 19.8 per cent. It is thus concluded that pregnancy does not increase the fatality of poliomyelitis.

Only sixteen cases were reported in which tonsillectomy had been performed within 2 months of the onset of the disease, this small number being attributed to the reduction in the number of such operations performed during the epidemic. While this group of cases is too small for statistical purposes, it is of interest to note that bulbar paralysis occurred in eight out of the sixteen.

Details are given of twelve cases in which it was at least possible that the infection was incurred through contact with another case in a hospital ward. The authors state that such cross-infection appeared to be less frequent in hospitals for infectious diseases and they suggest that until more is known of the mode of transmission it is not advisable to admit into a general ward any patient who may be incubating poliomyelitis.

Joseph Ellison


An account, supported by a spot map and tables, is given of the outbreak of poliomyelitis in the Administrative County of London during 1949, and some comparisons are made with the 1947 outbreak, as reported by Daley.

The similarities noted are: (1) A sample of hospital admissions indicates that the percentage of paralytic cases was approximately the same in 1947, 62 per cent. of confirmed diagnosis being paralytic and 46 per cent. having residual paralysis. The case fatality was 7 per cent., compared with 5 per cent. in 1947. (2) The sex ratio was not significantly altered.

Striking dissimilarities were a markedly disproportionate involvement of the London Boroughs north of

Since 1933 the Student Health Service of the University of Wisconsin has been investigating the incidence of tuberculosis among medical students and student nurses. Nearly all students were tested on entering the schools, first with 1 unit of tuberculin and then, if negative, with 100 units. Students who gave negative reactions were retested at 6-monthly intervals. Radiographs were taken on admission and on graduation, and also every 6 months in the case of reactors. After October, 1942, B.C.G. vaccination was made available to those whose reaction was negative. The multiple puncture technique was used on 445 medical students and 174 student nurses; all but two gave a positive reaction. There were no systemic reactions, local abscesses, or regional adenitis. Tuberculin sensitivity on entry varied for nurses from 8 to 42 per cent. and for students from 22 to 43 per cent. The percentage of students who gave negative reactions on entry and positive during training varied from 14 to 42; there was no decline in the conversion rate in the period before use of B.C.G.

The authors have studied the tuberculous morbidity in these different groups. They rightly stress that morbidity among those tuberculin-negative should be considered especially in respect of those who converted to positive. [There is some confusion in the statistics, for the proportion of conversions given in the analysis at this point is greater than that given earlier.] Of 33 nurses who gave positive reactions on entry, 59 converted to positive, and of these eight developed tuberculosis.

Among medical students entering from 1934 to 1943, 95 were positive on entry, and tuberculous lesions developed in two of these; 188 were negative on entry, 138 converted to positive, and of these nineteen developed tuberculosis. Among medical students entering from 1944 to 1947, 46 were positive on entry and two developed tuberculosis; 106 were negative and received B.C.G. vaccine and of these one developed a tuberculous lesion; 44 were negative and were not vaccinated, 34 converting to positive, among whom tuberculosis developed in six.

The results add strong support to the thesis that B.C.G. vaccination undoubtedly reduces the morbidity closely following primary tuberculous infection. M. Daniels


The anaemia described by Cooley and Lee in 1925 occurred in natives of the Mediterranean area, and was characterized by progressive pallor, splenomegaly, and a mongoloid facies. The disease had a familial incidence, the anaemia was microcytic and hypochromic, target cells were present, the erythrocytes showed an increased resistance to hypotonic salt solutions, and characteristic bone changes were found in the radiograph.

Since these cases were described, the syndrome has been recognized in patients of non-Mediterranean stock, and reports of cases showing minor manifestations of the syndrome have appeared. In this paper the clinical features in ten patients from four non-Mediterranean families are recorded. In most of the patients the disease was of the mild type, and radiological changes in the bones were present in only one case. The diagnosis was established by haematological examination, anaemia of the hypochromic microcytic type, target cells, and decreased erythrocyte fragility being found.

Symptomatic treatment was given with blood transfusions and administration of iron by mouth. R. M. Todd


In 1949 an attempt was made to eradicate malaria in Mauritius, which has an area of 720 sq. m. (1,865 sq. km.) and a population of 450,000, by spraying the inside of buildings that harboured two malaria-carrying mosquitoes, Anopheles funestus and A. gambiae. The former breeds all the year round, the latter only in the hot season, January to May. The buildings (total 79,829) were sprayed with preparations of DDT and BHC, first from January to May and again from August to December. This was followed by a striking reduction in the incidence of malaria, the annual death rate, the infant mortality rate, and the number of mosquitoes. The mean annual death rate per 1,000 population for 1934-48 was 27.2±3.7, that for 1949 was 16.6; the infant mortality rate for 1934-48 per 1,000 live births was 150±19.2, that for 1949 was 91. The percentage reduction in the number of mosquitoes caught in dwellings was: A. gambiae 97-12, A. funestus 99-85, and Aedes aegypti 99-94. The death rate from malaria during the epidemic first 6 months of the year was also much lower.
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The Endemic

The author reports of which another member another member 200 ABSTRACTS when 1 was 4.2]; for 1949 it was 12.9, and for 1950 it was 4.9. Among 6,445 children born after the first spraying, only fifteen (0.23 per cent.) had malarial parasites in the blood. A. gambiæ breed profusely after the heavy rains of March and April, 1950, and as the malaria incidence continued to fall, it was believed that this mosquito, repelled by the insecticide on the walls, had altered its feeding habits and had found outside resting places. This view was strongly supported by experimental observation and the question is to be further investigated.

J. F. Corson


In a previous experiment made in the same hyperendemic village in Malaya, the inside and the outside of the walls of all the houses were sprayed with 5 per cent. DDT solution in kerosene, at the rate of 100 mg. per sq. ft. (1929 sq. cm.), three times in 4 months [March to June, 1946]. Practically no mosquitoes, Anopheles letifer being the chief vector, were caught for 2 to 4 weeks after each spraying. In the author's experiment an empty block of houses was similarly sprayed once only, and two people slept in each house for 14 days from the day of spraying; no mosquitoes were found among the dead insects collected daily in the houses. As kerosene repels mosquitoes for a few days only, any repellant effect was due to DDT, and the author believes that the mosquitoes which entered were irritated by the DDT on the inside walls and escaped. A. letifer is an “outdoor rester” and will also feed outside the houses. Another important malaria vector in Malaya is A. maculatus which is also an outdoor rester though not an outdoor feeder. It was repelled to some extent when DDT was sprayed on outside walls only. The author considers that DDT can control A. letifer and malaria carried by it, and that it should be even more effective against A. maculatus.

J. F. Corson


Earlier observations indicated a relation between tuberculosis and familial thyrotoxicosis. The present authors report ten further cases of thyrotoxicosis, in all of which another member of the family showed thyroid dysfunction, and in six of which there was a family history of tuberculosis. They consider that thyroid disease is often the result of a tuberculous lesion, and that a systematic search would reveal tuberculosis in the families of two-thirds of thyrotoxic patients.

Nancy Gough


This article records the striking effect of iodized salt on the incidence of goitre in the various cantons of Switzerland. The incidence of goitre among children in 1922 was as high as 65 per cent. in some parts, and where prophylaxis has been carefully carried out this has fallen to below 5 per cent. There still appears to be a deficit of 100 μg. of the daily need of 200 μg. in the iodine intake of many of the population, but, despite this, goitre is becoming less common. Army discharges due to goitre have fallen from 64 per cent. in the period 1900-5 to 0.7 per cent. in 1944-47. Iodine lack is not the only factor in the production of goitre and vitamin A is important in this connexion. The post-operative relapse rate of goitre is reduced by the administration of iodine to all patients operated on for goitre, but it is not entirely abolished; it is possible that lack of vitamin A is responsible for these relapses. In the future it is hoped that the iodine content of salt will be increased to give an adequate daily iodine intake, and that animal manure will replace chemical fertilizers, because the former has been shown to increase the vitamin-A content of fodder and vegetables.

G. S. Crockett


Until the outbreak of war in 1940 there had been a rising mortality from diseases of the circulation in Norway. During the war there was a decline, with a quick return to former levels after the war. These trends were analysed for different age groups, different syndromes (apoplexy, arteriosclerosis, chronic nephritis, and chronic myocardiitis) and for urban and rural populations. Bearing in mind the changing fashions of diagnosis, the authors nevertheless consider that there is evidence of a correlation between the incidence of circulatory disease and the composition of the diet, especially in respect of fats. Although the over-all decline was the same in rural as in urban districts, analysis of the mortality from the various syndromes showed that the decline was much less in rural districts in respect of arteriosclerosis, and chronic myocardiitis - the conditions which might be expected to be most affected by a reduction in fat intake, which was naturally more marked in the towns.

Scott Thomson


In this paper the author first reviews the literature on the subject and then he presents his findings in a series of 525 cases seen at Leeds General Infirmary. These cases were first divided into thrombotic and non-thrombotic groups. The series was then further subdivided into different aetiological groups. In the thrombotic series of cases there was a positive family history in 25 per cent. It is pointed out that hereditary factors may have played some part in causing the thrombosis, so that this figure does not represent that to be found in the general population. In the thrombotic group 53.4 per cent. of the patients with ulcers caused by post-partum thrombosis gave a positive family history. It is noted that the mothers of ten of the patients and the sisters of two of these ten had also suffered from post-partum thrombosis. It is pointed out that special precautions seem to be indicated in parturient women with a family history of varicose veins, leg ulcers, or thrombosis, especially if the confinement is difficult.
Among the other patients in the thrombotic group, those with ante-partum thrombosis and thrombosis due to treatment of varicose veins, operation on the leg, and to unknown causes had a higher incidence of positive family histories than was expected. In "silent" thrombosis and thrombosis from recurrency heredity seems to play a doubtful part.

In the non-thrombotic groups heredity is clearly of importance in ulcers due to varicose veins alone. A positive family history was present in 89.9 per cent.

The number of patients with primary arteriosclerotic ulcers was small, but of these a large proportion gave a family history of leg ulcers without varicose veins. It is notable that, apart from the arteriosclerotic group, the proportion of patients with a family history of ulcers only was small compared with that of patients with a family history of varicose veins. Primary varicose veins seem to be the common factor in the family history, when positive, of most patients with leg ulcers of the post-thrombotic and the varicose types.

H. S. Laird


Family histories were obtained of 1,380 patients with diabetes mellitus in Ontario through personal interviews, from hospital records, and by questionnaire. A "positive family history" of diabetes was found in 50 per cent of females and 51 per cent of males. The percentage decreased steadily with increasing age of onset in males, from 70 per cent. when onset was in the first decade to 30 per cent, in the 8th decade. The trend in females was similar except for an unusually low proportion of positive family histories where onset was in the 2nd decade. Where the positive family history was bilateral the mean age of onset was 33-1, where unilateral 47-3, and where negative 53.8 years.

The authors conclude that diabetes mellitus behaves genetically as a graded character and that their findings conflict with the view that juvenile diabetics are homozygous and older diabetics heterozygous for a gene predisposing to diabetes.

[No definition of the term "positive family history" is given. It is not possible to read from the graphs shown the numbers on which the percentages quoted are based, since men and women are not shown separately on the graph of distribution of patients by age of onset. The bearing of this investigation on the genetics of diabetes is so indirect and so many qualifying factors are present that only tentative conclusions may be drawn.]

C. O. Carter


Examination of a Sicilian family over three generations showed the presence of the sickling phenomenon in the father and a gene for thalassaemia in the mother. A 38-year-old son was found to have a chronic haemolytic anaemia of the sickle-cell type as well as evidence of thalassaemia. His two sons were also found to have thalassaemia minor, while his brother and two nephews showed the sickling trait. Three possible hypotheses are discussed to account for the severity of the anaemia in the 38-year-old patient; the authors suggest that many of the reported cases of sickle-cell disease in Caucasians may actually involve a genetic situation comparable to the one reported here.

John F. Wilkinson


The importance of genetic factors in certain anaemias is reviewed and the authors postulate the existence of a type of haemolytic anaemia secondary to a hereditary defect in the synthesis of haemoglobin. In support of their hypothesis they present the case history of a white male patient who manifested a normocytic anaemia on repeated blood examinations over 14 years. A comprehensive study of the patient's blood picture and bone-marrow smear showed stippled cells and "inclusion bodies". Chemical and serological studies of blood revealed no abnormality. Blood volume was normal but plasma iron levels were unusually high at 2-0 to 2-2 mg. per ml. (normal 1-4 mg.). The rate of plasma iron turnover was, moreover, shown to be about double that in the control group of normal subjects. The erythrocytic life, computed from red cell iron turnover, was only 45 days in their patient compared with the normal of 95 days. Treatment with iron orally and intramuscularly, liver intramuscularly and intravenously, folic acid, vitamin B_12, and massive doses of vitamins had no effect upon the anaemia.

The patient's history revealed that his father had a refractory anaemia, and his sister and his daughter were both anaemic. This history, together with the similarity of the patient's blood picture (cell inclusions) to that in other cases of known hereditary origin, the absence of antibodies of acquired haemolytic anaemia, and the lack of symptoms suggesting the genetic nature of this case. The defect is probably the defective passage of iron between the cytoplasm and nucleus which renders the synthesis of haemoglobin faulty. In this way stippled cells are formed and these are more fragile than normal cells.

Experimental observations on iron turnover in the nuclei and cytoplasm of rabbit bone-marrow cells support the theory of this defect. No treatment is suggested for anaemias of this type.

H. Payling Wright


The authors describe a family of seven siblings, three of whom died in the first day of life from bilateral renal tumours. Necropsy in one of these showed a cystic renal malformation belonging to a late stage of renal development. Pyelography in the other members of the family revealed nothing abnormal in the kidneys, but showed that the mother and her four other children had a spina bifida in the region of L5 and S1. The possible relation between these two findings is discussed.

A. Middelhoek (Excerpta Medica)
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The authors have studied from amongst 250 cases of Rh sensitization investigated at the University of California Medical School, thirty in which normal Rh-negative infants were born. Tables are given indicating the results of the serological tests and details of previous children. The cases fall into two groups: (1) in which the Rh antibody was present in every examination, and (2) in which it was present in some examinations, but not in all. The first group was further divided into those cases in which the titre of antibody rose by at least two dilutions, and those in which it remained constant. In those showing an increase in titre, appreciable amounts of antibody were found in all cases, both in saline and albumin. In those with a constant titre, seven out of ten showed an appreciable amount of antibody and in six out of eight this was present in saline and albumin. In the second group of cases titres were low in all, but were present in saline and albumin in seven out of thirteen cases.

The authors attribute the rising titres to an "anamnestic" reaction occurring during pregnancy, and the constant titres as being due to carry-over from a previous sensitization. In the latter group, however, they found greater ABO incompatibility between mother and child than might have been expected, and the failure of the titre to rise might be due, in their opinion, to competition of antigens.

H. G. Farquhar


The incidence of kernicterus was studied in all the infants with erythroblastosis foetalis born alive at the Boston Lying-in Hospital from 1945 to 1948, or admitted to the Children's Hospital, Boston, in 1947 to 1948. The frequency of kernicterus in the infants born alive was 12 per cent., and 5 per cent. in those infants surviving the first week of life. The greater the intensity of maternal sensitization the more likely is kernicterus to develop. The authors consider kernicterus to be a disease of neonatal life, more likely to occur when the period of gestation has been less than 38 weeks, so that immaturity more or less cancels any gain obtained by induction of labour. There would appear to be a familial tendency to kernicterus, as with a past history of a previously affected infant, the chances increase of this complication reappearing in a subsequent live-born Rh-positive infant.

W. G. Wyllie


In view of suggestions that transfusion of female blood, rather than male, improved the chances of survival of infants with erythroblastosis, the authors present an analysis of 55 cases, of which 23 received blood from female donors and 32 from male donors. The over-all mortality was 17.6 per cent., and no advantage was observed from the use of female as compared with male blood in exchange transfusions, even in cases of a severe type.

W. G. Wyllie


Four cases of hemolytic disease of the newborn infants are reported. There was ABO incompatibility and high maternal immune antibody after delivery. Immune antibody was demonstrated in the sera of three of the four infants. The difficulties in making an unequivocal diagnosis are discussed and the diagnostic value of immune antibody in the infant's serum is emphasized. The presence of spherocytosis and altered erythrocyte hypotonic fragility during the hemolytic phase is noted. These findings are similar to cases of acute hemolytic anaemia in adults previously reported.—[Authors' summary.]


Known and suspected carriers of haemophilia were compared with normal female controls in respect of: (1) history of abnormal bleeding; (2) coagulation time as estimated by Bürker's and Lee and White's methods; (3) prothrombin consumption on clotting; (4) titration of anti-haemophilic factor in whole blood. It was found that 5 per cent. of normals, 47 per cent. of known carriers, and 17 per cent. of mothers of one haemophiliac son, bled excessively after tooth extraction (out of 100 normal persons and nineteen known and twelve suspected carriers). The coagulation times and antihaemophilic-factor content of the blood showed no differences between the groups. Of 21 known carriers, three showed abnormal prothrombin consumption on clotting; these three bled excessively after tooth extraction. These results were too inconstant to be of diagnostic value.

G. Discombe

The Differential Diagnosis of Haemophilia on Biological Grounds. (Diagnostic biologique différentiel des hémophilies.) GUILLOT, M., and FIEHNER, A. (1951). Sang, 22, 114. 5 figs.

The authors briefly discuss true haemophilia and its differential diagnosis. A valuable table is presented for the distinction of true haemophilia, para-haemophilia, and the pseudo-haemophilia of Castex and Pavlovsky.

A. Piney


The hypoprothrombinaemia occurring normally in the first few days of life may be prevented by the administration of vitamin K. The present paper records an investigation, carried out at five largest maternity units in Liverpool, of the effect of routine administration of vitamin-K analogue to mother during labour. The 4,602 children of treated mothers were compared with...
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12,136 children whose mothers had received no vitamin K. Haemorragic disease of the newborn occurred in eleven of the test infants (1 in 418 cases) and in 23 of the controls (1 in 527 cases).

It is concluded that vitamin K does not always succeed in preventing haemorrhagic disease of the newborn and that its routine use in maternity units is not justified except possibly in cases where there is an increased risk of neonatal bleeding.

J. A. Chalmers


The seasonal incidence of congenital malformations of the central nervous system has been investigated, two sources of information being employed: (1) the annual reports of the Registrar-General for Scotland which have given the certified causes of stillbirths by month from since 1939, and (2) special observations made on 930 consecutive children with such malformations born in Birmingham in 1940-47. The former data revealed a seasonal trend in anencephalus, but not in other defects. The monthly rate of stillbirths attributed to anencephalus rose progressively from June to reach a maximum in the months of November to February and then fell off. For the 8 years 1939-46, the rate for the half-years April to September was 2.20 per 1,000 total births, and for October to March 2.83 per 1,000, a difference which is unlikely to be due to chance. The Birmingham data also revealed no significant seasonal variation in the incidence of spina bifida and hydrocephalus, but a substantial difference in the half-yearly rates of incidence of anencephalus—1.94 per 1,000 total births in the second and third quarters combined, and 2.70 per 1,000 in the fourth and first. In those cases where information on the length of gestation was available, the proportion conceived during the half-year from April to September was substantially greater for the children with anencephalus than for normal children. This seasonal variation cannot be simply explained in terms of seasonal changes in the relative proportions of first and of later births. No history of a specific fever during pregnancy was obtained from the mothers of the malformed children. The number of cases of malformation of the system among 470 sibs born after the birth of a child with such a malformation was thirteen as against an expected number of approximately two.

A. Bradford Hill


In this discussion of the incidence of foetal malformations, material from the Municipal Clinic for Women, Chemnitz, from the years 1945 to 1949, is compared with material collected during the years 1931 to 1933, 1934 to 1935, and 1937 to 1938, the same number of deliveries (5,346) being involved.

A definite increase in the incidence of malformations after the war was noted. The average figure for the years 1945 to 1949 is 2.4 per cent. as against 1.15 per cent. during 1931 to 1933, 0.34 per cent. in 1934 to 1935, and 0.26 per cent. in 1937 to 1938. The increase in malformations of the central nervous system is definite. The following groups were distinguished: central nervous system 42.4 per cent., limbs 28.7 per cent., cleft formations of the face 10.7 per cent., others 18.2 per cent.

A subdivision of mothers into four age-groups shows that the groups with the greatest reproductive capacity are associated with the highest incidence of foetal malformations, and in this group particularly the primiparae and secundiparae. The author concludes that malnutrition (especially protein deficiency) and psychological difficulties may well have some effect on the incidence of foetal malformations.

Albert Eichner


In the University Clinic for Women, Leipzig, the incidence of malformation in newborn babies was investigated during the years 1936 to 1948 (43,647 infants). Among the 399 cases of malformation (0-91 per cent. of all cases) an increase in incidence of malformation of the central nervous system was noted. Since 1945 a decrease in incidence of malformations has been observed. An explanation for this might be found in nutrition, the ages of the mothers, or infectious diseases. In accordance with the experiments of Gillman and others (1948), an alteration of the albumin-globulin ratio in favour of the globulin fraction is regarded as the cause. The above-named external factors do indeed cause a disturbance of the albumin-globulin quotient. The influence of external factors on the development of the malformations is stressed.

Albert Eichner

Dysostosis Multiplex (Gargoilyism) with Maldevelopment of the Membrane of Bowman. (Beitrag zur Frage der Dysostosis multiplex (Pfaundler-Hurler) mit Fehlbildung der Bowmanschen Membran.) Wagner, F. (1951). Z. Kinderheilk., 69, 179. 10 figs, 26 refs.

The author describes in detail a case of gargoilyism in a boy, and reviews the literature of this rare disease. When the patient first came under observation at the age of 3 months, few of the characteristic symptoms had developed, and the bone changes then found might well have been rachitic. Later all the usual symptoms developed, until, at the age of about one year, the child showed the full picture of gargoilyism, including corneal opacities. Rise in intra-ocular pressure was found on only one occasion. The child died at the age of 2 years after a herniotomy, and necropsy confirmed the clinical findings. Histologically there was an almost complete absence of the membrane of Bowman.

Marianna Clark


The relation between spina bifida and hydrocephalus has not yet been fully clarified. The author reports four fatal cases of spina bifida with meningomyelocele accompanied by hydrocephalus; three of the patients died soon after operation for repair of the meningomyelocele and the fourth of an intercurrent illness. In three of these cases the Arnold-Chiari malformation was
found at necropsy. Reviewing the literature, the author accepts the view that the Arnold-Chiari malformation is secondary to fixation of the spinal cord in the lumbar region during foetal development, and that the cerebral lesions are secondary to the resulting hydrocephalus. The argument is rejected that closure of the meningomyelocele necessarily increases the degree of hydrocephalus; on the contrary, this procedure is advocated as the treatment of choice, to be carried out, accompanied by decompression of the atlanto-occipital region, during the first few days of life.

H. McC. Giles


The authors review 24 cases of oesophageal anomaly (21 of atresia, three of stenosis) seen at the Buffalo Children’s Hospital during the 10-year period 1940-49. The most common type of congenital oesophageal atresia (fourteen out of 21 cases in the present series) consists of a blind upper pouch and a lower segment which connects the stomach to the trachea. Untreated, this may cause death in any of three ways: by starvation, by regurgitation of gastric contents into the trachea, and by the aspiration of pharyngeal mucus. The most frequent diagnostic error in this type of case in the present series were bronchopneumonia and intracranial birth injury. Other congenital anomalies occurred in eight of the fourteen cases, in two of which there was an imperforate anus. It is stated that “marked abdominal distension during the first two days after birth is apparently not due to imperforate anus alone but is apt to occur when there is an associated tracheo-oesophageal fistula”. The fact that nine of their 24 cases occurred during a period of a few months suggests to the authors that oesophageal anomaly may be environmental rather than hereditary in origin.

Eight of the patients were operated upon. In one case gastrostomy alone was performed, and the patient died at operation; in three a tranpleural operation was performed, all the patients dying post-operatively; and of four infants in whom an extrapleural anastomosis was carried out, two died post-operatively, one lived for 21 months, and one survived. The case histories of three of these cases operated upon by one of the authors are given. The treatment advised is extrapleural operation with closure of the tracheal fistula and end-to-end anastomosis of the oesophagus, followed by gastrostomy a day or two later. “Insufflation of the oesophagus with oxygen while the anastomosis is inspected under physiologic saline solution is offered as a useful but not infallible test of the competence of the suture line.” A. G. Riddell


The material for this important study of Hirschsprung’s disease consists of 40 consecutive cases treated at the Hospital for Sick Children, Great Ormond Street, London. All cases were confirmed by histological examination of the affected bowel. The authors define the disease by pathological and clinical criteria, give a genetic study of 37 of the families, record the results of the new operative treatment by rectosigmoidectomy in 37 cases, and discuss the pathology and pathogenesis.

True Hirschsprung’s disease is a congenital malformation, with inco-ordination of peristalsis in a variable length of terminal bowel, due to absence of the intramural ganglion cells in the affected part and a dysplasia of the associated autonomic nerve-plexuses. This agenesis of nerve-cells results in narrowing of the length of gut affected and produces dilatation of the bowel above.

Although this can be confirmed only by microscopically examination of the bowel, the diagnosis can be made radiologically, a barium enema clearly showing the terminal narrow length of large bowel with the dilated bowel above. This radiological picture distinguishes Hirschsprung’s disease from the much commoner condition of idiopathic megacolon, where dilatation extends right down to the anus.

The genetic study differs from other published reports in the much larger number of cases, and in the accurate radiological and histological diagnoses. To 37 cases the examination of all the siblings of the families added four more cases, all in boys; this gave a total of 41 cases, of which 38 were in boys and three in girls. It was judged from inquiries, without examination, that there were no cases of the disease among the parents, grandparents, uncles, aunts, and first cousins of the patients. The authors discuss in detail their findings in regard to family incidence and conclude that there is a genetic determination of the disease, with a 1 in 5 chance of affection in a male sibling and a much smaller chance in a female sibling. Similar family investigations by other workers are needed, including an examination of the children of patients successfully treated, before the nature of the genetic factors can be determined.

Treatment by the operation of rectosigmoidectomy [introduced at the Boston Children’s Hospital by Swenson and Bill about 3 years ago] was carried out in 37 cases. There were three deaths, two under anaesthesia and one from peritonitis. Of 32 children who have been followed up over periods of 6 months to 2 years, all are in excellent general condition, passing regular motions (about half assisted by laxatives), and all but one have attained an average weight. In three cases there has been anal stricture which has not retarded general progress.

As the morbid anatomy, all but one of these cases were of the “short and intermediate segment” variety, not going above the sigmoid-colon junction; and in an aggregate of ninety histologically verified cases (including the authors’ cases), 82 were of this short and intermediate variety, while eight were of the “long segment” variety, where the abnormal bowel extended to the splenic or hepatic flexure and in one case for a short distance up the terminal ileum. In this much less common variety the prognosis is bad, and most of the deaths occur in this group. The morbid histology of all forty cases of the present series showed a complete absence of intramural ganglion cells in the affected segment, with an increase in size of the intramural autonomic nerve fibres.

The authors cautiously discuss the pathogenesis. Their view, “purely theoretical” and based on the morbid anatomy and histology, is that there is a disturbed development of the intramural ganglion cells, which is genetically determined; and that the time of occurrence...
Thirty-six Years’ Experience of the Treatment of Pylorospasm in Newborn and Young Infants with Papaverine. (36 Jahre meiner Papaverintherapie der Spasmen des Pylorus bei Neugeboren und jungen Säuglingen.)

The author lays stress on having introduced, in 1913, the treatment of pylorospasm with papaverine. Since that time he has treated hundreds of infants with this drug, provided that an early diagnosis had been made. In the presence of a palpable pyloric tumour papaverine has little or no effect, still less in hypertrophic stenosis of the pylorus. The author is of the opinion that the functional spasm resembles the allergic spastic vomiting, both of which may lead to a muscular hypertrophy. To avoid such a development he recommends the combination of papaverine 0.01 g. with amidopyrine 0.05 g. 3 to 4 times daily. In cases of vomiting, suppositories, medicated enema, or injections of papaverine hydrochloride are indicated.

Franz Heimann


The authors emphasize the importance of prematurity in causing neonatal deaths, of which more than half occur in premature infants. They point out that one should not assume prematurity or atelectasis as such to be the primary cause of death unless all other possibilities have been excluded. Eighty-four premature infants were investigated. They weighed from 500 to 2,500 g. and had a duration of life ranging from 2 minutes to 25 days, 54 having lived less than 24 hours. The authors found that asphyxia was the cause of death in twenty cases, cerebral intraventricular haemorrhage in eleven, congenital syphilis in ten, bronchopneumonia in nine, congenital anomalies in four, and miscellaneous lesions in nineteen. Only in the remaining eleven cases could death be considered as due to no other cause than simple prematurity. [This study was undertaken at a hospital in New Orleans, Louisiana, U.S.A., and 71 of the infants were coloured. This may explain the high percentage of congenital syphilis, and it is also striking, in view of similar studies made in Europe, that only two of the 84 infants had died showing a tentorial tear.]

Of the twenty cases of asphyxia, fifteen showed an intra-pulmonary asphyxial membrane, with well-established aspiration of amniotic debris. In five there was only loose amniotic material in the respiratory tract. Microscopical examination is considered necessary because the macroscopical picture of an asphyxial membrane is indistinguishable from mere atelectasis, bronchopneumonia, and haemorrhage. Some interesting observations are made on the cases of bronchopneumonia, which disease is believed usually to start in utero. Whether it is always due to bacteria derived from infected amniotic fluid cannot be determined, and the possibility of simple irritation by amniotic material cannot be excluded. Bacteriological examination was of no value in view of post-mortem invasion. No apparent correlation could be established between premature rupture of the amniotic membrane and bronchopneumonia in infants living less than 24 hours. Premature rupture had taken place in three out of eleven cases of bronchopneumonia, and in eleven out of twenty cases without this disease. In bronchopneumonia, as in asphyxia, histological examination is essential to establish the diagnosis; the infection may be patchy, necessitating an extensive search in all areas of the lungs. [The authors themselves raise a point which will occur to all readers of their paper who have ever themselves carried out a necropsy in a case of neonatal death. This is the difficulty of deciding which of several findings should be considered the primary cause of death and which factors should be considered merely contributory. Thus in an infant with a small tentorial tear, mild subdural haemorrhage, bronchopneumonia, and a history of premature rupture of the foetal membranes, should bronchopneumonia be considered the primary cause of death, or the intracranial damage? It is admitted that in many instances only an arbitrary decision can be made.]

H. Lehmann


This is the first of four studies made in the Department of Obstetrics and Pediatrics of the Jewish Hospital of Brooklyn. In this investigation all live-born babies weighing less than 2,250 g. were included, there being 962 of these in a total of 20,234 deliveries (4.8 per cent.).

The authors reached the following conclusions: There was no significant variation in incidence of prematurity cannot be the 5-year period studied. There was a greater incidence among ward patients than among private patients, but this difference may be due to the greater number of negroes among the former, negro babies being significantly smaller than white babies. It is pointed out that ward patients have a lower economic status than private patients. [No figures are given for these differences.] There was no seasonal or monthly variation in the incidence of prematurity. There was a greater incidence in primiparous women (61 per cent.) of the total births 51 per cent. occurred in primiparous and 49 per cent. in multiparous: 17.4 per cent. of premature infants resulted from multiple pregnancies. Complications of pregnancy occurred in 46.5 per cent. of premature births, the commonest being toxaeemia (20 per cent.) and antepartum haemorrhage (16 per cent.). Bleach presentation occurred in 16.4 per cent. (against 3.7 per cent. of the 20,234 deliveries); compared with vertex presentation, a higher neonatal mortality occurred only in those infants weighing less than 2,000 g. Premature rupture of the membranes was not associated with any greater neonatal mortality than was late rupture. After induction of labour by rupture of the membranes, delivery by Caesarean section resulted in a lower foetal mortality
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The fatality rate of 791 liveborn premature infants delivered at the Jewish Hospital of Brooklyn during the 5-year period from 1941 to 1945 was investigated. The data were analysed to determine the significance of fetal maturity and of magnitude of birth weight as factors influencing survival. It was found that for a given weight group the fatality rate varied inversely with the length of gestation period. In other words, the outlook for the infant improved in proportion to the degree of its maturity. This was especially striking in the case of infants weighing less than 1,500 g., a result which served to emphasize the importance of length of gestation period as well as birth weight in predicting the chance of survival. Premature infants born of multiple births had a lower over-all fatality rate than those born of single births. This was directly attributable to the greater maturity of babies born of multiple births.—[Authors' summary.]


The authors have extended their previous work (Lancer, 1949, 2, 598) on the relation of birth weight to subsequent weight and height by investigating other standard body dimensions in groups of children of different birth weights. The object was to ascertain whether such measurements would account for the subsequent differences in weight found in children of different birth weights. A total of 238 children between the ages of 5 to 8 years were studied and were divided into three groups according to their birth weights: 5 lb. (2.5 kg.) or less; 7 lb. 2 oz. to 7 lb. 6 oz. (3.2 to 3.5 kg.); 8 1/4 lb. (3.85 kg.) or more. The standard body dimensions examined were weight, pelvic and calf girth, chest circumference, and standing and sitting height. The methods used to obtain these measurements are described. They found that all the measurements were smaller in those of low birth weight than in those of high birth weight and that the measurements of children of average birth weight fell between the two. These findings were found to be statistically significant (there is an appendix to the paper in which the statistical methods used are described). Emphasis is placed on the importance and possible long-term effects of controllable factors that influence birth weight, such as premature induction of labour and the prevention of prematurity by the improvement of the nutritional and social circumstances of the mother.

David Morris


Out of a total of 9,600 parturient women, 346 (3.6 per cent.) were primiparæ over 35 years and classed as "elder", 41 were over 40 years, the two oldest being 45 and 46; the majority were 35 and 36 years. A similar number were primiparæ between 18 and 29 years and were classed as "younger": 23 were under 18 years of age. All cases were from the authors' clinic at San Francisco, California, and the methods and techniques were much the same in each group. The study extended over 27 years and any important change in treatment as time passed was adopted by the authors' associates, so that comparisons between the different groups are not affected.

For the purpose of comparison the following are among the diagnoses selected: placenta praevia, premature separation of the placenta, toxæmia, hypertension, cardiac disease, pyelitis, post-partum haemorrhage, contracted pelvis, occipito-posterior and breech presentations. The authors also discuss the types of delivery required, the incidence of forceps, day of delivery in relation to expected date of confinement, induction, and duration of labour in each group.

Those interested in the detailed statistics should, of course, refer to the original article, but the following facts may be of interest: (1) The incidence of elderly primiparæ was 3·6 per cent. (2) The incidence of toxæmia was 6·8 per cent. in the elderly, and 2·3 per cent. and 4·3 per cent. respectively in the two younger groups. (3) Placenta praevia, premature separation of the placenta, pyelitis, and myomata uteri occurred only in the elderly group. These conditions did not occur in patients under 29 years old. (4) Post-partum haemorrhage, cardiac disease, and pyelitis were more common among the elderly. (5) Third-degree lacerations were more frequent in the two younger groups, particularly in primiparæ under 18 years of age. (6) Posterior vertex presentations were more common in the elderly, and operative procedures were required more often for these conditions in the elderly than in the younger groups. (7) Forceps and Caesarean-section deliveries were increased in the elderly, but vaginal breech deliveries were about the same in all three groups. Caesarean section was more often needed for breech cases in the elderly. (8) Prolonged labour, both 24 to 30 and also over 30 hours, was a little more common in the older women. But the average length of prolonged labour was 32·32 hours in the elderly group as compared with 42·42 hours in the younger. (9) Incidence of contracted pelvis was 3·06 per cent. in the elderly, 1·44 per cent. in the younger, and 8·7 per cent. in primiparæ under 18 years. (10) Average weight of babies was about the same in all three groups. (11) Maternal and foetal mortality were increased in the elderly group.

The authors conclude that there is more risk for the elderly primipara, chiefly because she is more apt to acquire those diseases which occur more frequently as age increases.

E. W. Kirk


An analysis of more than 6,000 cases delivered at the University of Alberta Hospital shows a substantial reduction in the average estimated blood loss during and after delivery after much closer attention had been given to certain points of detail in the preparation for and management of labour. In a series of 2,000 cases,

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reported in 1948, there was a loss of more than 600 ml. blood in 15.7 per cent., and amounting to more than 1 per cent. of body weight in 10 per cent., with an average loss of 323 ml. in the third stage. In the present series of 4,204 patients delivered since then, blood loss averaged only 219 ml., and only exceeded 600 ml. in 4.3 per cent. and 1 per cent. of body weight in 3 per cent. Episiotomy or laceration of the perineum resulted in an average increase of 189 ml. in blood loss in the first series, and of 110 ml. in the second. Similarly, the effect of the duration of the third stage on the amount lost was diminished, the average loss in the first series being 292 ml. where the duration was under 6 minutes, increasing to an average of 529 ml. where the duration was greater than 60 minutes, whereas in the present series the average loss amounted to 214 ml. where the duration was under six minutes, increasing only to 314 ml. where the duration was greater than one hour.

This substantial reduction of blood loss in the third stage is attributed to the following factors: (1) Superficial of the patient's meconium. It is to consider that at an optimum level, heavier patients having an increased tendency to blood loss. (2) The treatment of anaemia and diminished specific gravity of the serum during pregnancy with judicious iron therapy. (3) Better estimation of the pelvic capacity and earlier detection of soft-tissue dystocia, thereby avoiding unnecessary lacerations. (4) More active interference in the third stage by giving intravenous ergometrine as soon as the anterior shoulder is born, with expression of the placenta following the birth of the baby. If the placenta is slow in separating and bleeding occurs, manual removal should be proceeded with in the shortest possible time. (5) Keeping sedation within reasonable limits and avoidance of complete unconsciousness in labour, together with conditioning of the patient to the physical strain of labour and combating the fear-pain-tension syndrome on the lines laid down by Read. Relief of pain is thus attained through strengthening the psychological powers of control of the patient rather than with heavy doses of narcotics. With the adoption of these methods mental and physical post-partum apathy has greatly diminished and, as the records of cases show, this has been attended by a marked decrease in blood loss in the immediate post-partum period.

A. Wallach


The authors are of the opinion that in cases of premature rupture of the membranes spasm of the soft parts develops during labour more frequently than in those cases where the uterus is not yet ready to begin expulsion of its contents and that therefore attempts to induce labour by use of oxytocic drugs or other means are incorrect and may bring about complications. On the contrary, an attempt should be made to reduce resistance of soft parts with the help of spasmolytic drugs. This is the policy of the Landesfrauenklinik in Wuppertal, at which the authors investigated 2,782 cases of premature rupture of the membranes, seen during 1937 to 1946, and treated with spasmolytic drugs. The drugs used were at first "eupaco", suppositories, and later "spasmalgin" injections. The doses are not given in detail, but the average doses are given in two diagrams.

The results obtained were encouraging. The figures for instrumental delivery and Caesarean section were halved in primiparous and diminished in multiparous; asphyxia was less common and the figure for foetal mortality was improved. Complications during the third stage, injuries to the cervix, and incision of the external os were less common. Pyrexia during labour was somewhat commoner owing to the prolonged duration of labour, but the incidence of puerperal pyrexia due to genital injuries was diminished by half.

Martin Schötzl


During the year 1946 the incidence of cases of eclampsia admitted to the County Hospital, Göppingen, was high, amounting to eight out of 619 normal births, corresponding to a frequency of 1 in 77. On the other hand, only five cases of eclampsia were observed in 1,238 births in the University Clinic, Tübingen. Regional differences between Göppingen and Tübingen (both in Württemberg) do not exist, and the difference must be ascribed to other circumstances. Analysis of case histories showed that patients in Göppingen had had much more to eat. All patients coming from this region could get all the fat and protein they wanted. The author thinks that this factor was associated with the increase in incidence of eclampsia in Göppingen.

Albert Eichner


The age of the menarche calculated by Probit analysis in 3,000 school-children in England averaged 13.5 years. Weight and height differences appeared to have no causal relation to onset of menstruation. Growth in the adolescent girl is affected by maturation more particularly in body build rather than in height.

D. B. Fraser


In order to assess the value of a rise in the basal body temperature in indicating accurately the time of ovulation, the authors studied its relation to changes in the appearance of the endometrium and of the ovaries in eighteen patients at the Sloane Hospital for Women, New York, who were awaiting laparotomy and who showed the characteristic mid-cycle rise of basal temperature. The patients were admitted to hospital several days before the expected temperature rise, and laparotomy was performed on the day this occurred. (The temperature
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was taken only once daily, so that an error of up to 24 hours was to be expected.) At operation an endometrial biopsy was obtained and the ovaries were examined, any corpus luteum present being excised and examined microscopically.

The authors consider that the interpretation of the age of the corpus luteum in days is not an easy procedure, but they accepted as normal the disappearance of cell mitosis at 12 hours, the ingrowth of fibroblastic cells at 24 hours, the invasion of the new luteum layer by capillaries in 36 hours, and complete vascularization by the end of 48 hours. On this basis, in six of the eighteen patients there was no definite evidence of ovulation having occurred; in two cases the appearances fell into the 12-hour group, in four into the 24-hour group, in two into the 36-hour group, and in the other four they were equally divided between the 48- and 72-hour groups. The changes in the endometrium, on the other hand, were much less advanced, no evidence of luteal activity being found until the corpora lutea were at least 36 hours old.

From these findings it appears that there can be a difference of up to 4 days between the time of the basal temperature rise and the time of ovulation, and the authors therefore consider it not to be a suitable method for clinical use unless its limitations are fully appreciated.

Elaine M. Sunderland


There is good evidence that cyclic bleeding of the anovulatory type can occur, and that it is indistinguishable from ovulatory menstruation in duration, amount, and nature. Hartman found that in apparently healthy rhesus monkeys, which menstruate regularly throughout the year, menstruation without the formation of a corpus luteum was the rule in the summer months, while ovulatory cycles were prevalent in winter. Similar anovulatory cycles were common at puberty, in the post-partum period, during lactation, and after strenuous journeys or physical illness. For determining ovulation in women neither estimation of gonadotrophin or of pregnanediol excretion nor the local body temperature chart is reliable. The most reliable method at present is endometrial biopsy.

This was the method followed in the present investigation, which concerns 36 women whose complaint was involuntary sterility. Great care was taken to get reliable results. Thus cases of irregular or sporadic bleeding were excluded; the previous menstrual period must have preceded the biopsy by at least 21 days, and the biopsy must have been taken within 2 days of the next flow. Adolescent girls were excluded, as were women whose menstrual period had started more than 12 hours before the biopsy. Only thirteen of the women reported normal menstruation; ten had oligomenorrhea, seven had oligomenorrhoea followed by episodes of temporary secondary amenorrhoea, and five had a history of normal cycles interspersed with short periods of secondary amenorrhoea. Such menstrual irregularity in sterile patients is evidence of hormonal imbalance, and, especially if there is also obesity and hirsutism, should lead one to suspect the possibility of anovulation.

Among the 36 women there were 47 instances of anovulatory cycles, the number of anovulatory cycles varying from 1 to 5. Nineteen of the 36 were anovulatory for the entire duration of the investigation and follow-up, while the remaining seventeen were periodically so. Of these seventeen women four became pregnant. The authors suspect that the true incidence of anovulatory cycles is much higher than is usually believed.

F. J. Browne


After a survey of the literature on the "amenorrhoea of war ", the author records his own studies carried out in a Russian concentration camp from 1946 to 1950. Among 1,300 women he found 656 suffering from amenorrhoea, that is 46 per cent.

In the aetiology of the condition the first place is given to psychic trauma and then to individual predisposition. Alimentary conditions and stress are only contributory factors. Frequency, duration, and symptomatology are then discussed in detail, especially in respect of the age of the women.

Emotional factors give rise, it is suggested, to neurovegetative disorders arising from the diencephalon and affecting the secretion of the pituitary in such a way as to cause the arrest of ovarian activity and consequently amenorrhoea.

R. d'Amico


Uniovular Twins Showing Growth Disparity due to Renal Dwarfism. MILNE, M. D. (1951). Lancet, 1, 204. 3 figs, 19 refs.