ABSTRACTS

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


The effect of specific therapy on common contagious diseases was assessed by a study of the mortality figures from vital statistics of the U.S. Bureau of the Census, and the morbidity rates tabulated by the U.S. Public Health Service. Since the introduction of the sulphonamide drugs there has been a striking fall in the mortality rates. As penicillin was not generally available until 1945 its effect is not under review.

Death rates from pneumonia are of interest, for the figures for 1945 were half those of 1935, yet when the mortality rates for the different age-groups are scrutinized the fall is seen to be unequally distributed. Thus in 1938, 65 per cent. or less of the deaths occurred in children under one year old, but in 1945 this proportion had risen to 75 per cent. A similar state of affairs occurred in measles and whooping-cough.

At the beginning of the century the mortality rate for diphtheria was 20 per 10,000 and by 1940 it had fallen to 1 per 100,000. This decline can be attributed almost entirely to specific prophylactic vaccination. There has been little tendency for either the morbidity or the mortality rate to fall further since 1940, and, as there are in the U.S.A. almost 15,000 cases annually with over 1,000 deaths, the situation cannot be viewed complacently.

Since 1926 the morbidity rate for scarlet fever has fallen, but at the same speed as the decline in mortality rate since the advent of sulphonamides.

Whooping-cough in 1925 displaced diphtheria as the chief cause of death amongst the common infectious diseases; 95 per cent. of these deaths are in children under 5 years. Since active pertussis immunization was started there has been a steady decline in incidence, with a relative increase in deaths amongst infants of under one year. The author suggests that few children under 1 year have been protected, hence a greater proportion of these are attacked, and since it is difficult to administer sulphonamides to them the death rate is higher. This mortality can be combated by immunization during the first year, and use of penicillin in place of sulphonamides.

The cause of death in measles being secondary pneumonia, sulphonamides have caused a reduction in mortality rate, with a relative increase in the rate for children under one year. With the increased employment of penicillin the infantile death rate should diminish.

Although sulphonamides have reduced the mortality rate in meningoococcal meningitis, two factors prevent still better results: late diagnosis, and difficulty in drug administration. Increased admission to hospital with increased use of diagnostic lumbar puncture, together with penicillin therapy, should improve future mortality figures.

A. Michael Critchley


All infections occurring in the newborn in two maternity units in Cambridge from May, 1947, to April, 1948, were recorded. Unit A, the larger, accommodated 56 normal cases in four wards. Unit B had ten beds in two wards for cases of abnormal labour. The term infection included any evidence, however trivial, such as the presence of a single pustule, or a "sticky" eye persisting for over 24 hours.

In Unit A the infection rate was 8.3 per cent. (104 cases in 1,257 live births). In Unit B the rate was 10.3 per cent. (nineteen in 185 live births). In A, 68 out of 104 infections involved the eye; in B, there were three out of nineteen, the lower rate being possibly due to protection of the eyes in B with a single layer of gauze during cleaning of the nursery. The infections included rhinitis, enteritis, thrush, pneumonia, otitis media, and chicken-pox. Incidence was fairly even throughout the year except for one small epidemic (nine cases of eye and skin infection) in A in March, 1948. There was no death in A due to infection, but in B a premature infant died of otitis media.

Staffing, accommodation, and nursery technique are described, including certain conditions "less than ideal", these being: (1) restriction of floor space in some nurseries, especially the only nursery of B; (2) no proper provision for isolation; (3) no milk kitchen; (4) no special nursery nurses in A; (5) careless wearing of masks. The reasonably low infection rates are attributed to a low rate of infection in mothers and staff [no maternal morbidity figure is given], and adequate staffing, cross-infections being prevented by barrier nursing and treatment.

Reports of an infection incidence of 20 to 30 per cent. in large nurseries (with up to fifty infants) are contrasted
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The Source of Infection in Pemphigus Neonatorum.


An outbreak of pemphigus occurred in a twenty-bedded maternity unit, lasting from mid-March to early August. The nursery was overcrowded, containing from fifteen to 25 babies. By transferring about one-third of the mothers and infants to a separate annexe on the 2nd or 3rd day of the puerperium, and discharging infants on the 8th or 9th day, the numbers were kept down with a high turnover. Conjunctivitis was endemic, and diarrhoea began coincidentally with the pemphigus epidemic but continued for some time after the epidemic subsided. Staphylococcus aureus was isolated in nineteen out of 36 cases of conjunctivitis but was found in as many stools from healthy infants as from those with diarrhoea.

Nasal swabs were taken from the staff and the mothers at regular intervals: nasal swabs were also taken from all babies as well as swabs from the bullae. For a 5½-week period, daily nasal swabs were taken from the infants. Phage typing was carried out by the method of Wilson and Atkinson (Lancet, 1945, i, 647).

Staph. aureus was found in all bullae, being of the same type (3A+) in the last nine cases. Three of the strains from eye swabs were typed: two belonged to the same type. Of 613 nasal swabs taken from infants 96 from newborn infants were nearly all sterile. Staph. aureus was present in 210 (34 per cent.) and was isolated from about 50 per cent. of cases at the end of the first week. Type 3A+ occurred in 38 infants out of the 54 with Staph. aureus in the nose. Phage typing was carried out on less than half of the cultures. A table shows that one type was always predominant, being present throughout the epidemic. The strain was presumably brought into the nursery by some adult, and was carried from child to child. Overcrowding and lack of staff made it impossible to carry out barrier nursing. The possibility of putting the children’s cots at the foot of the mothers’ beds will have to be considered.

The incidence of nasal infections in the staff was considerably reduced by regular spraying with penicillin. The 3A+ type was last found in a nasal swab from a nurse 1 month before the end of the outbreak.

The article shows clearly the dangers of large understaffed nurseries and provides further evidence for the wisdom of keeping the baby with the mother, for in no case did the “epidemic” staphylococcal strain appear in a maternal swab.

J. G. Jamieson

Stages in the Development of Collective Immunity in Malaria.


The term “collective immunity” refers to the immunity that develops in a population exposed almost continuously throughout life to malarial infection. It is assumed that the average spleen and parasite rates observed in age groups taken together represent the average course of development of immunity in the people during their lifetime. The strength of immunity, as indicated by these rates and by observations on the crescents and the relative incidence of the species of malarial parasites, varies in different places, and these may be arranged to form an ascending scale of stages in the development of collective immunity.

Schüffner, Swellengrebel, Annecke, and de Meillon (Zbl. Bakt., 1. Abt. Orig., 1932, 125, 1) concluded, from a comparison of signs of immunity in populations of Sumatra and Java with those found in African negro populations, that the differences observed were racial. N. H. and J. M. H. Swellengrebel (Med. Tijdschr. Geneesk., 1948, 92, 3498), however, found parasite rates in Papuans living in highly endemic parts of North-Western New Guinea similar to those in South African Bantu tribes and African negroes in Surinam, Dutch Guiana; they concluded that the opinion of Wilson and Wilson (Trans. R. Soc. trop. Med. Hyg., 1937, 30, 431) that these differences between Indonesians and Africans were not racial but due to external circumstances had much in its favour.

In the present paper the author reviews the observations made in Indonesia, South Africa, and Surinam and compares them with those of the Wilsons in East Africa and India. He concludes that there is no reason why Western Indonesians, if sufficiently exposed to infection, should not reach the highest stage of collective immunity seen in some groups of Papuans, nor why Papuans should not reach the highest African stage. A few cases of malaria have been reported from Papua, and the view of Schüffner et al. that the ability to reach the highest stage is a hereditary character has still to be disproved. In Surinam a deterioration within 4 months from a fully immune status raised doubts as to the stability of collective immunity in malaria. The effect of exposure to foreign strains of parasites is touched upon in the case of adults of Surinam.

The original papers referred to by the author should be read by those interested in this complex subject.

J. F. Corson

The Nation-wide Campaign against Malaria in Venezuela.


Venezuela has a population of about 4,000,000 living in an area of 912,000 sq. kilometres. The coastal sector of less than one-fifth of this area, contains three-quarters of the population and is less malarious than the central area, where about one-fifth of the population lives. Malaria is listed as one of the five major causes of death. In 1936 a special anti-malarial service was inaugurated and survey and drainage work carried out, but conditions did not improve in the rural areas till the advent of DDT. The chief vectors are Anopheles darlingi, mainly anthropophilic with a mean sporozoite index of 0.9 per cent., and A. albimanus, mainly zoophilic with an index of 0.6 per cent. Plasmodium falciparum is the predominant parasite, though below the age of 5 years P. vivax is more prevalent. Seasonal periodicity corresponds to rainfall, with slight variations according to the parasite concerned, but a 5-year cycle has been noted.
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In 1945 DDT house spraying was started with a 50 per cent. wettable powder made into a 5 per cent. suspension and delivered in the strength of 2 g. DDT per sq. metre. By the end of 1948 the percentage of houses protected by DDT was 37.2 and the malaria death rate had fallen from an average of 112.2 in the period 1941-45 to 14.8 in 1948. These results suggest the possibility of eradicating malaria from the country, but this will depend on the conviction of malariologists themselves that it can be done.

Clement Chesterman


It is generally accepted that residual spraying with DDT for the control of the anopheline population automatically results in a reduction of the sandfly population. In the past, in regions where the two insects co-exist, exact data concerning the results achieved have unfortunately, been confined to the results of anopheline surveys and claims to have reduced the sandfly density rest mainly on general impressions, which are notoriously unreliable. This state of affairs is well illustrated in Greece and Crete, where malaria and leishmaniasis are both prevalent and where an extensive anti-malaria campaign has been in progress for several years, no fewer than 700,000 houses being sprayed with DDT in Greece in 1946. But whereas each year much valuable information has become available concerning the reduction in anopheles and in malaria, in the case of the sandfly the reduction has only been indicated by such phrases as “incidence greatly reduced” or, as was often the case, “sandflies have practically disappeared”.

During 1948, the author and his colleagues, working under the auspices of the World Health Organization-Interim Commission, endeavoured to obtain more exact records than had previously existed concerning the effects of DDT residual spraying on the density of Phlebotomus spp., and on the incidence of Leishmania tropica and L. donovani. Their observations were carried out in Athens and its surrounding villages, in Crete, and also during a short visit to Sicily and Sardinia. The interpretation of the observations recorded concerning Phlebotomus density was complicated by various factors. Where “official” sprays had been carried out there were no exact records of the previous abundance, or otherwise, of sandflies, while in many of the more heavily infested areas not so treated the local inhabitants had purchased and used insecticides on quite a large scale. Moreover, observations on the incidence of leishmaniasis amongst the human population had to be considered in relation to fluctuations in the canine reservoir of the disease. Thus in Canea, in Crete, there had been a very marked decline in the incidence of kalaazar, but this was shown to have occurred before the use of DDT and was probably the result of the selective destruction of infected dogs and of a general reduction of the canine population. It is of great interest to compare this fall in the incidence of L. donovani infection following the reduction of the canine reservoir, with an equally notable drop in the incidence of L. tropica infection observed in certain villages in Crete, which was unquestionably associated with the reduction in sandflies resulting from the use of DDT for malaria control.

In view of the many potential factors which might influence his deductions, the author refrains from drawing any sweeping conclusions from his extensive observations, the results of which are carefully analysed; nevertheless, he considers that “the following general conclusions are warranted: (a) Treatment of interiors with residual DDT gives immediate and virtually complete protection from sandflies indoors. (b) House spraying alone, in compact communities, with an annual, preferably pre-season, treatment, eventually reduces the Phlebotomus population within the sprayed areas to near the vanishing point.”

R.M. Gordon


The author claims that in a limited area to the east of the Volta river, Gold Coast, the incidence of human trypanosomiasis has been reduced by 97.5 per cent. in the ten years 1938-47. The method used is termed “selective clearing” and consists in removing, along a complete river system, only those forms of vegetation which are an essential constituent of the dry-season habitat of the tsetse. The tsetse communities of Glossina palpalis and G. tachinoides disappeared when clearing was completed and the cleared areas were readily cleared by the people, a population density of 20 to the sq. mile (7-7 to the sq. km.) being sufficient to maintain clearance. In addition, selected sites such as ferry or ford crossings and washing and drinking water sites were cleared. Attention to the tributaries along which the people lived was more important than attempting the too costly task of clearing the main river banks. The author considers that this method is cheaper and more effective than the so-called “protective clearing” of wide areas round human habitations, and more radical than chemotherapy measures, with regular mass surveys and treatment centres. (The method seems well adapted to this area, where a dry season drives the flies to seek cover in restricted areas, but it is doubtful if it could be applied to the rain forest regions, where there is little or no seasonal variation.)

Clement Chesterman


This experiment was designed to test the value of orally administered penicillin as a prophylactic measure against intercurrent infections. The subjects were members of a voluntary health insurance plan and included all age groups above 7 years; they were divided by random sampling into a group of 1,486 persons receiving penicillin tablets and a control group of 1,451 receiving tablets of calcium carbonate of similar size. During the course of the year there was a gradual diminution in the numbers continuing to attend, and during the last month only 631 persons were still participating in the experiment—295 in the penicillin group and 336 controls. All persons were asked to submit a monthly report, giving details of illnesses, time lost from work or other activities, visits to doctors, and treatment in hospital; 9,264 such reports were received—4,582 from persons taking penicillin and
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4,682 from controls. At the start of the experiment the dose of penicillin was 50,000 units twice daily; after 4 months the dose was increased to 100,000 units twice daily, and after a further 3 months it was again increased to 200,000 units twice daily. The numbers of monthly reports during these three periods were 3,582, 3,685, and 1,997 respectively.

Analysis of the reports showed that oral penicillin in the dosage used had no prophylactic value. There were no significant differences between the treated and control groups as regards incidence of respiratory or non-respiratory disease, time lost from work, frequency of visits to doctors, and admissions to hospital, or between the results in the different age groups. Nevertheless many patients reported subjective benefit both from penicillin and from the control tablets. Mild toxic reactions were reported by ninety patients receiving penicillin and by 64 patients receiving control tablets, the commonest complaints in both groups being indigestion, skin lesions, and headache.

A. R. Kelsall


The blood of both parents of thirteen persons suffering from sickle cell anaemia, and of one of the parents of sixteen others, was examined for sickling. All these parents showed the sickle-cell trait. This strongly supports the hypothesis that a dominant gene is responsible, which in heterozygotes gives rise to sickling, and in homozygotes to sickle-cell anaemia. A small proportion of heterozygotes may also develop anaemia.

J. A. Fraser Roberts


Of 308 children, aged 6 to 18 years, of a pure-stock Bantu tribe, the sickle-cell trait was found to be present in 13-6 per cent. Family studies showed that the trait behaves as a Mendelian dominant. It is suggested that sickle-cell anaemia occurs in the homozygotes only.

J. A. Fraser Roberts


The incidence of consanguineous marriages amongst the parents of a series of diabetics was found to be higher than the normal. This, however, was confined to those developing the disease relatively early in life. In 505 subjects whose age at the time of onset was under 30 there were ten instances of parental consanguinity of all degrees compared with an expectation of 3-6. The difference is significant. On the other hand, amongst those over 30 at the time of onset the observed and expected figures were almost identical. It is concluded that there are genetical differences between diabetes of early and of late onset and that the former may be determined by one or more recessive genes.

J. A. Fraser Roberts


A study of 112 cases of Werdnig-Hoffmann's disease among the siblings of seventy families served to show the extremely complicated genetic factors at work. It would appear that recessive inheritance is a likely cause and the high consanguinity rate (eight times higher than in a control group) favours this theory. However, some families showed incomplete dominance. Variations in the course and severity of the disease were frequent as between families, but most unusual in any given family. This, the author concludes, suggests the existence of two or more co-acting genes.

Wilfrid Gaisford


In this monograph the authors give an excellent and exhaustive illustrated description of the peculiar syndrome first described by Franceschetti in 1944. After a thorough clinical and genetical analysis of six personal observations, the cases from the current literature are dealt with and the clinical features are discussed. The chief features of mandibulo-facial dysostosis are: (1) palpebral fissures sloping downwards laterally, with a coloboma in the outer portion of the lower lid; (2) hypoplasia of the facial bones, especially the malar bones and the mandible; (3) malformation of the external ear; (4) macrostomia, high palate, and malocclusion of the teeth; (5) blind fistulae between the angles of the mouth and the ears; (6) atypical hair growth.

The patients present so many common features that they look like siblings. There are complete or typical forms, and incomplete, abortive, unilateral and atypical forms. Inheritance is irregularly dominant. The pathogenesis is that of an inhibitory process occurring towards the seventh embryonic week and affecting the facial bones (from the first visceral arch). The authors adhere to the theory of a disturbance of the action of the organization centre probably due to a lethal or sublethal effect of the gene concerned. The relation to other types of cranial dysostosis (such as Crouzon's dysostosis) is mentioned.

E. Godtfredsen


On the basis of a study of a considerable number of families and isolated cases, the authors conclude that the common basis of most cases of coronary atherosclerosis in patients below the age of 50 years may be an inherited disturbance of the cholesterol metabolism which manifests itself in an elevated blood cholesterol level (above 300 mg. per 100 ml. of blood). Familial xanthoma is the severe form of this inherited disturbance. Xanthelasma and arcus corneae are other stigmata of the same condition, while hypertension does
not seem to form part of the disease. [The suggestion that the condition is inherited as a semi-dominant character with irregular manifestation appears plausible. On the other hand, the identification of the more severe clinical pictures with homozygotes and the less severe (and subclinical) cases with heterozygotes for the gene in question would require a much firmer genetical basis than that presented by the authors.] 

H. Grünberg


The authors describe a case of stenosis of the aqueduct of Sylvius in a hydrocephalic newborn male infant. Two other male children in this family and four of six males in the preceding generation had been born with hydrocephalus. The brain had the characteristic appearance of advanced hydrocephalus due to distension of the lateral ventricles. In the cerebrum the histological changes consisted of destruction of ependyma, subependymal gliosis, foci of microglial phagocytes in some parts of the white matter, and relative preservation of the cortex. The fourth ventricle was normal in size, the foramina of Majendie and Luschka were patent, and the subarachnoid normal in appearance. The marked dilatation of the lateral and third ventricles was due to stenosis of the aqueduct of Sylvius. Though not occluded at any point it showed definite narrowing of its middle portion. Presumably the narrowed aqueduct was functionally incompetent so that cerebrospinal fluid was formed more rapidly than it could escape from the third ventricle. There was nothing to indicate that the aqueduct was crowded by a faulty migration of primitive neuroblasts and spongioblasts, nor was there any astrocytic hyperplasia or other histological evidence of an inflammatory process. Ependymal rosettes, which are believed by some workers to indicate a premature closure of the neural tube, were present, but since these are commonly found in the raphe of the mid-brain, in the lateral recess of the medulla, and near the central canal of the spinal cord in normal cases, their exact significance must remain in doubt.

The pedigree in this case was so short that it was impossible to determine whether the dominance in males was due to the presence of a sex-linked factor or to a difference in penetrance of the affected genes. However, it provides substantial evidence in support of the occurrence of stenosis of the aqueduct of Sylvius as an inherited abnormality.

R. M. Stewart


The author mentions a variety of causes of sterility—psychological, physiological, and pathological—and stresses the need for a careful and complete examination in all cases. Increased knowledge of female sex hormones and the use of tubal patency tests have aided and clarified diagnosis but have not increased perceptibly the number of cases successfully treated.

During the last 10 years the number of women in Freiburg seeking advice increased fourfold. The author analyzes certain points in 461 cases seen at his clinic. The majority of patients (75.1 per cent.) were between 26 and 35 years; 14.8 per cent. were between 35 and 45, and only 10 per cent. between 20 and 25 years. The fertility rate begins to fall after the 30th year, more markedly after the 35th year, and, in multiparae, steeply after the 40th year. Advice was sought in 243 per cent. of cases of primary sterility within 2 years of marriage, in 45 per cent. after 3 to 6 years, and in 17.6 per cent. between 7 and 10 years after marriage. Siegel believes that after 5 years of married life the chance of a first pregnancy occurring is only 2 per cent., but in this series 11 to 18 per cent. of patients conceived after 6 to 10 years of sterility, while 5 per cent. conceived after 10 years. The duration of treatment necessary was slightly more prolonged when the period of sterility was long—7.6 months when sterility was of 2 years' duration and 12 months when of 8 years' duration.

Investigation of sterility in 461 cases showed that in 165 (35.2 per cent.) the cause was tubal. In 153 cases the diagnosis was made by salpingography. Salpingography was carried out in 266 cases in preference to insufflation (seven cases) as the author considers it more reliable, particularly in cases of unilateral blockage. He believes that salpingography is without danger provided the patient has been examined and found to have no disease of the adnexa, stays in bed for 2 days, and is investigated during the first half of the menstrual cycle, but that there is a slight risk of producing mechanical obstruction by irritation of the tubal and peritoneal epithelium by "lipiodol". Bilateral closure was present in 79 cases and unilateral closure in 59 cases. Laparotomy was carried out in 26 of the 79 cases of bilateral closure and the finding was confirmed in 15 cases only.

The cause of sterility was ovarian in 28.6 per cent., uterine in 19.5 per cent., and constitutional in 18.2 per cent. of the cases. Tubal obstruction is, in the author's view, rarely due to appendicitis; it may be the result of a previous abortion, a history of which was only obtained in 7 per cent. of the cases. Tuberculosis of the tubes accounts for a small number of cases, but in the largest number of cases the cause was not discovered.

Of 267 patients treated and followed up, 65 (23.9 per cent.) became pregnant; 45 had living children.

Gladys Dodds


The authors investigated the contraceptive history and practices of 2,000 private obstetric patients living in and around Baltimore. Over 99 per cent. of the patients were white, more than 85 per cent. were aged between 20 and 35, and about 90 per cent. were in the professional and business classes. The following four questions were put to patients at the first antenatal visit, which usually took place at about 8 to 9 weeks of pregnancy: (1) Did you use contraceptives? (2) What method did you employ? (3) Was this pregnancy planned? (4) When was contraception discontinued?

From these investigations the following facts came to light. Of these patients 65 per cent. had conceived after abandoning contraception in order to become pregnant, while 17 per cent. had never used contraceptive methods.
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and in 19 per cent. contraceptive measures had failed. Hence it appears that 80 per cent. of these patients had wanted pregnancies; but this does not take account of those who attended the illegal abortionist when contra-
ception failed. The most popular contraceptives were the condom and the diaphragm, which together totalled 85 per cent. of the contraceptives used. These two together proved the most effective.

Of the planned pregnancies 60 per cent. occurred within 3 months and 90 per cent. within one year of the cessation of contraception. This does not, of course, account for the unknown number in whom the cessation of contra-
ception was not followed by pregnancy.

Elatine M. Sunderland

The Process of Gestation and its Effect on Idiopathic
Epilepsy. (Gestationsvorgänge und genuine Epilep-

Of 231 female epileptics admitted in the years 1925 to 1948 to the Kretschmer Clinic, Tübingen, 28 had their first attack during gestation. In 151 cases pregnancy, parturition, and puerperium had no influence upon the frequency of the seizures. In four cases there was temporary and in one permanent improvement; in 23 there was temporary and in seventeen permanent deterioration during gestation. The frequency of attacks were therefore only permanently affected in eighteen cases (7·8 per cent. of the series). The analysis of the group in which deterioration occurred showed that in eleven cases it occurred during pregnancy, in one case during partur-
ition, in one in the puerperium, and in four cases during lactation. As a rule deterioration occurred during the first gestation. The number of pregnancies with no influence upon the attacks decreased with age, but the number of cases observed was too small for any conclu-
sions to be drawn.

A connexion between hormonal factors and manifesta-
tions of epilepsy is suggested. In 22 per cent. of cases seizures started with the first menstrual period; they occurred predominately at the time of the period in 17·3 per cent. In 10·8 per cent. menstruation had stopped or become irregular. In 32·2 per cent. there were suggestions of endocrine disturbance. Of the seventeen patients in whom gestation caused deterioration twelve were of dysplastic or aplastic type, pale and fat, with irregular or late periods and disturbances in water metabolism. This constitutional inferiority was in the author's opinion responsible for the deterioration during gestation.

Mental deterioration, observed in five cases after several pregnancies, is regarded as another indication that the frequency of attacks will increase during gestation.

R. Klein

Relation of Birth Weight to Physical Development in
Childhood. Illingworth, R. S., Harvey, C. C., and Shan-
yah Gin (1949). Lancet, 2, 598.

The authors have carried out a statistical survey of the records of 2,426 Sheffield children in order to establish the relation between birth weight and subsequent physical development. Birth weights were obtained from the midwives' antenatal charts and hospital and

infant welfare records rather than from the mothers (it having been found that of 110 mothers, 10·4 per cent. were over 8 oz. (250 g.) wrong in their recollection of the birth weight of their children). On this basis, the children were divided into four groups—5½ lb. (2·5 kg.) or less, 7 lb. 2 oz. to 7 lb. 6 oz. (3·2 to 3·3 kg.), 8½ lb. to 9½ lb. (3·8 to 4·3 kg.), and 9½ lb. or more. There were 517, 712, 940, and 257 children in the respective groups, approximately equally divided between boys and girls. Records of height and weight were obtained from the child welfare clinics and school medical officers. Small samples of from four to 36 of each sex in each birth weight group were taken in half-yearly age groups—from 2 to 13 years for weight and from 4½ to 13 years for height.

The authors found a constant uniformly graduated difference in weight between those of the lowest and those of the highest birth weight groups; for instance, a difference of 5·3 lb. (2·5 kg.) in boys aged 5 years and of 11·2 lb. (5·1 kg.) in girls aged 7 years. The difference in height was not so marked, but was definite, there being 2 to 6 cm. difference in average height at all ages between the lowest and highest birth weight groups. Similar differences were found in limited samples whose develop-
mental and nutritional status was assessed by means of the Wetzel grid and Tuxford index.

The roles played by body build, maternal malnutrition, and nutrition in infancy are discussed, with special reference to animal experimental work. The importance of these factors in influencing physical development, and the need for their study in future surveys of this kind, are emphasized and it is suggested that the commonly used developmental charts of weight and height may need to be modified so that birth weight may be taken into consideration. It is pointed out that no indication is given in the authors' records of the effects of the onset of puberty.

It is to be deplored that there is no statement of the statistical validity of the data and conclusions in this paper, which is entirely based on statistics.

David Morris


A review is made of the investigations on problems of mental deficiency which have been carried out since 1906 in Great Britain. The author hopes that as the National Health Service develops we may be able to deal with these problems more comprehensively than has been possible in the past ".

A. Michael Critchley


Of all patients with cancer admitted to the Hines Hospital, Illinois, U.S.A., from 1931 to 1946, 1·8 per cent. had cancer of the tongue. The incidence in coloured patients was similar to that in white. Syphilis appeared to be an aetiological factor, for 22 per cent. had a positive complement-fixation reaction compared with only 5 per cent. among all patients admitted. There did not seem to be an undue prevalence of oral and dental sepsis, although 10 per cent. had leukoplakia; in many this responded well to massive doses of crude brewers
yeast. A double primary lesion in the tongue was seen only once in the series of 330 patients, but an unrelated primary malignant growth in some other part of the body was found in seven. The more differentiated cancers were commoner in the anterior two-thirds of the tongue, while the anaplastic cancers were commoner at the base. About half of the growths occurred in the latter situation and in 80 per cent. of these the lymph nodes were already affected when they were first seen, compared with 50 per cent. in growths of the anterior two-thirds. The authors comment on the delay in treatment as compared with other series. Distant metastases were rare, being present in only ten of the 72 cases coming to necropsy. They were usually in lungs or liver. Biopsy examination was carried out for all suspicious lesions and repeated if negative.

Treatment was mainly by deep x-rays, with interstitial radon seeds in many cases in addition. Surgery was sometimes used as well, but rarely as the sole treatment. The 5-year survival rate in cases without cervical metastasis was 43 per cent., but in patients with cervical metastasis it was 4-6 per cent. The over-all 5-year survival rate was 14 per cent., rates being equal for growths of the base and those of the anterior two-thirds. In view of the poor results in patients with cervical metastasis the authors have, in the past 2 years, employed radical surgery when the metastases are unilateral. Their operation consists of block resection of the area of primary growth and the lymph nodes, together with half the mandible.

H. J. Croot


A statistical study is presented of cases of cancer of the uterus seen in the gynaecological clinic of the Faculty of Medicine at the University of Seville from May, 1931, to the end of 1947.

Of 922 cases of cancer of the uterus observed, 829 were cases of cancer of the cervix, and 93 cases of cancer of the corpus, a ratio of 8:6 to one. Of the 829 cases of cancer of the cervix, thirteen arose in cervical polypi. Cancers of the cervix were classified as follows: 490 exophytic, 255 endophytic, 31 laminated, and forty infiltrating. There was a family history of cancer in 66 cases and a history of obstetric dystocia in 4:12 per cent. In five cases a polyp of the cervix had been extirpated.

The age of onset was widely spread over the various age groups. The majority of lesions of the cervix were found at ages between 41 and 60, but there was a relatively higher incidence of carcinoma of the corpus in women over 61 years of age. Parity appeared to influence the incidence; more cancers of the cervix and of the corpus occurred in parous women, but the number of children borne appeared to have little relation to incidence, except that the incidence of cancer of the uterus was higher in women who had borne nine or more children.

In treatment, surgery is preferred for cancer of the cervix except in stage III, when radium and x-ray therapy are used. The operation of Schauta with Schuchard's paravaginal incision is preferred except in cases where extraction of the uterus by the vaginal route is difficult, when Wertheim's hysterectomy is performed. For carcinoma of the corpus the operation of choice though, in unsuitable cases, abdominal hysterectomy is carried out.

Of the cases of cancer of the cervix 21-6 per cent. were operable. Vaginal operation was performed in 158 with an operative mortality of 16-96 per cent., and abdominal operation in fifteen with an operative mortality of 32-25 per cent. These mortality rates are high, but many of the patients were under 36 years old and these operations were performed before the era of sulphonamides. For cancer arising in a polypus, operation was undertaken in six cases with a mortality rate of 16-67 per cent. Treatment with radium was carried out in 55-85 per cent. of cases of cancer of the cervix. In 22-55 per cent. of cases of cancer of the cervix the condition was far advanced and only symptomatic treatment was possible. The operation rate in 93 cases of cancer of the corpus was 52-68 per cent. Vaginal hysterectomy was performed in 37 with a mortality rate of 2-85 per cent. In twelve cases of abdominal hysterectomy there was no mortality. Radium treatment was given in 28 cases of cancer of the corpus, while in sixteen cases only symptomatic treatment was possible.

Josephine Barnes


The main interest of this study lies in the long duration of the follow-up observations. The study was carried out on a group of 745 nurses who had been originally admitted as students to training school at the Boston City Hospital. In this hospital cases of tuberculosis were scattered throughout the medical wards. No nurse was included in the study unless she had been under observation for over 5 or under 15 years.

Of the nurses 362, or 48-6 per cent., were tuberculin negative on entry: in 283 the reaction became positive; of these 38 (13-6 per cent.) developed tuberculosis. On entry 374 were tuberculin positive: 31 of these (8-3 per cent.) developed tuberculosis. Of the forty cases developing in nurses tuberculin negative on entry, two arose after training, 33 (82-5 per cent.) arose in the first 2 years after conversion of the reaction, three (7-5 per cent.) in the next 3 years, three (7-5 per cent.) in the following 5 years, and two (5 per cent.) between 11 and 15 years after conversion of the reaction. Of the 31 cases developing in nurses tuberculin positive on entry, ten (32 per cent.) arose in the first 2 years, twelve (39 per cent.) in the next 3 years, nine (29 per cent.) in the following 5 years, and none subsequently. The authors confirm the finding of many other workers that the pulmonary lesions developing in initially tuberculin-negative and tuberculin-positive persons are clinically and radiologically similar. They conclude that "most, if not all, of the disease in this group was primary, first infection tuberculosis, whether it appeared in the initial reactor or non-reactor to tuberculin". [The argument leading to this conclusion is obscure.]

M. Daniels

The first of these three papers treats of pulmonary tuberculosis among Indonesians in Batavia purely from the pathological aspect and almost solely from that of pathological anatomy. It is based on the very slender foundation of the post-mortem examination of 63 Indonesian patients, mostly tramps who had "often travelled from other parts of the country in a last effort to gain a living in the 'metropolis'. Many of them only came to the hospital to die". The author divides cases of primary infection, according to the pathological findings, into three types: (1) Primary tuberculosis of the childhood type with involvement of the lymph nodes. (2) Primary tuberculosis with greatest activity in the lungs—an acinous pneumonia with subsequent caseation and breaking down of the lymph nodes which may end in rupture into a bronchus and a florid phthisis, or into a blood vessel with dissemination and generalized military disease. There is no need in such cases to bring in the question of a hypothetical re-infection. (3) In those cases in which, as is more common in adolescent and adult life, there is primary apical infection of a lobe, cavitation occurs earlier, the adenitis will correspond with the focal area, and pleurisy is a fairly common complication. In the author's series, the instances of primary disease constituted by far the majority. Thus, out of 63 cases, there were seven in which the primary complex was limited or healed, in fourteen there were complications, in eleven lesions of the childhood type of primary tuberculosis, and in eighteen primary disease with cavitation; in thirteen only was there clear evidence of re-infection, in four pulmonary, and in nine limited or disseminating. [Neither in the text nor in his bibliography does the author refer to the much more extensive and detailed work on 300 necropsies on tuberculous subjects in China, published as a M.R.C. Special Report, No. 149, in 1940.]

H. Scott.


This is a most valuable analysis of the gains of random mass miniature radiography (M.M.R.). The author reviewed 526 full-size skigrams showing post-primary tuberculosis out of about 34,000 Leeds volunteers. Of the smaller group 233 findings were discarded as insignificant, though in 24 of these lesions were extensive (in four of these the condition progressed later); 293 cases referred to the clinic for observation were divided into two groups, those with minimal lesions (232) and those with advanced (44 moderately and seventeen far advanced). Amongst the 526 patients with radiographic changes 441 had minimal lesions, radiologically classified as "calcifying" (25 per cent.), "microscopic calcification" (25 per cent.), and "patchy or mottled" (25 per cent.). Though "the very numerous calcifying lesions must represent the residues of once more extensive soft lesions . . . they have retrogressed without ever having given rise to recognized illness".

Analysis of 206 cases of "minimal lesions" followed up for 2 to 4 years showed that of 85 purely calcifying lesions only one spread and seven healed, of 55 soft and calcified lesions eleven spread and twelve healed, and of 66 patchy or mottled lesions 21 spread and nineteen healed. The rest remained unchanged. Spread in half the cases occurred within 1 year. Though on radiological grounds groups in which spread is more likely can be selected, no individual forecast can be made. Apart from radiological progression, changing symptoms and signs, toxaemia, and positive sputum led to classification of the subject as a sufferer from tuberculosis in need of treatment. In those suspected on radiological grounds of tuberculosis but with no symptoms, no signs, no history, and no sputum, radiological signs of progression, stability, or regression must decide the issue.

Of these suspects 29 were eventually classified as suffering from tuberculosis, fourteen after a period of apparent stability. "However completely suspects are investigated, delayed spread cannot be avoided" unless every suspect is taken off work—an impossible proposition.

Thus, of 34,000 volunteers radiographed within one year, ninety suffering from tuberculosis were discovered. Of these, 51 unsuspected cases with positive sputum and their family contacts were helped most, 31 with negative sputum being also helped to a lesser degree. A rough estimate of the total expenditure (1944-46) "suggests that it costs about two shillings to x-ray each volunteer and about £60 to find each sufferer. Present day costs will be appreciably higher." "If one potential sufferer is overlooked more than 300 have been x-rayed in vain."

The abstractor has repeatedly suggested that random miniature radiography of apparently healthy people is wasteful and purposeless, and that the radiographers should concentrate on the suspected and the endangered section of the population. (Publ. Hth., Lond., 1944, 58, 7; Lancet, 1947, 2, 955.) See also Memorandum of the N.A.P.T. Council, February, 1949.

E. G. W. Hoffstaedt


This long report, which is described as a preliminary communication, is based upon the examination of 572 survivors of the political prisoners taken by the Germans in Denmark, and of 710 of the Danish policemen deported by the Germans in September, 1944. The authors describe the diet and general conditions in the concentration camps, and report in detail the various symptoms and effects of prolonged starvation: cachexia, oedema, polyuria, diarrhoea, anaemia, muscular atrophy, atavistic mineralosmes, glandular changes, and infections. They deal with the mental effects of imprisonment and starvation, and discuss the changes that occur after release and repatriation. The various disorders and diseases cleared up to a varying degree and at varying rates, but the outstanding impression in this survey was the high rate of tuberculosis.
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of tuberculosis among the survivors, diagnosed up to three years after their return. The other feature disclosed by the investigation was the high incidence of neurosis among the survivors. Altogether 286 of the survivors were unfit for work for periods of two months or more after their return. This was due to general weakness in 5 per cent., tuberculosis in 34 per cent., psychological disorder in 42 per cent., and other diseases in 19 per cent.

B. Nordin


This paper describes a clinical study of 315 children referred to the Mott Foundation Children's Health Centre because of some chronic infection or faulty nutritional condition. The children's ages ranged from 2 to 17 years, the period of observation from 3 to 32 months. In addition to appropriate medical advice and treatment, all patients received a supplement of vitamins A, B, C, and D; a few received iron and liver. [The indications, preparations, and doses are not given.]

Some form of chronic infection was found in 304 children (96.5 per cent.). The commonest condition was disease of the tonsils (72 per cent.) [the diagnostic criteria are not stated]; the next commonest was involvement of the upper anterior cervical lymph nodes. The author found that in this group 96.4 per cent. were improved as regards the infection and the nutritional state, after 3 months of the supplemental therapy. It is also stated that out of 227 children who at the time of the first examination were considered to need removal of tonsils and adenoids, 133 were found at the end of that period of observation to have improved to a point where the operation was not needed [a not uncommon happening whatever treatment is given]. A faulty nutritional status was observed clinically in 39.5 per cent. of the cases. The commonest complaints made by the mothers regarding these children were of poor appetite and nervousness.

After a 10-month observation period and supplementation alone 82.9 per cent. of children were well, very much improved, or much improved; 90 per cent. of children were improved to a similar degree when, in addition to supplementation, tonsils and adenoids were removed.

P. T. Bray


Statistics have shown that dental caries is probably the most widespread disease of Western civilization. The outstanding difference between the diets of primitive and civilized man is the presence in the latter of a great deal of refined sugar. To investigate the possible harmful effect of refined sugar on the teeth the controlled experiment described in this article was carried out.

"Two groups of fifty children each were observed regularly from birth until 5 years of age, as to their dental condition. One group had very few sweets in their diet, with additional emphasis on the coarseness of food, and on regular vitamin supplements. The other, or control group, had the average American diet with plenty of sweets and irregular vitamin supplements: both groups used the same water supply."

It was found that at 5 years of age 78 per cent. of the group under diet control had no visible cavities, the average being 0.18 cavities per child, while the control children had 5-22 cavities per child, and only 6 per cent. had no cavities. These results suggest the following conclusions. "The balance of evidence points to easily fermentable carbohydrates, especially sucrose, as the main offenders. A child's diet, at least until 7 to 8 years of age, should include (a) a bare minimum of sweets, (b) a good amount of coarse foods, and (c) a maintenance amount of vitamins. In addition, it might be advisable to give the unavoidable quota of sweets at the beginning of the meal only, and to have a raw, coarse fruit or vegetable at the end, with raw fruit for snacks." A further conclusion was that tooth brushes and tooth paste are of less value than suitable diet.

[From the facts supplied, the conclusions drawn are reasonable and support the advice usually given in Britain. The only possible variable to which the author does not give much weight is that in the experimental group the parents were co-operative; in the control group the co-operation was poor.]

D. Robertson-Ritchie


