severe colds; for it was a lone house and at a distance from any inhabited neighbourhood."

Again, there is a definite aroma of Gin Lane in Case 463:

"A poor woman in St. Giles's was delivered by Mrs. More and some of my pupils, who gave her some money; which being soon spent in gin with her gossips, she went out begging with her child on the fourth day after delivery, was taken with violent pains and a fever that night, and with great difficulty recovered by blooding and antiphlogistic medicines."

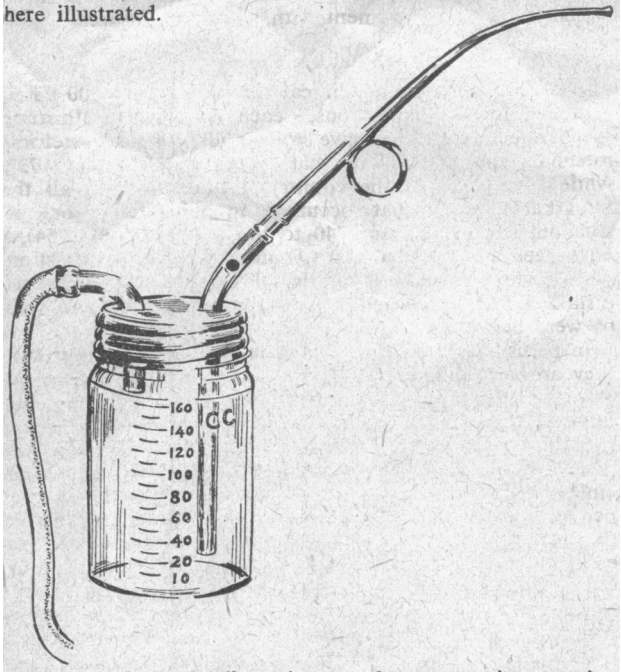
A very great help to practitioners in his day was his magnificent *Set of Anatomical Tables* issued in folio in 1754 as an obstetric guide. It was provided with figures by Rymdijk and Camper, the originals of which are now in the University of Glasgow. Dr. Johnstone's book provides a most readable account of the possibilities of extending scientific and clinical knowledge which are open to the right kind of practitioner without any institutional backing. It is, however, a pity that the work is not better indexed and is without a bibliography. Perhaps on this account the reviewer has been unable to find in it reference to "Erb's palsy," which Smellie is said to have been the first to describe.

CHARLES SINGER.

Preparations and Appliances

SUCKER APPLIANCE FOR CLEFT-PALATE SURGERY

Mr. W. G. Holdsworth, F.R.C.S., of the Plastic and Jaw Unit, Rooksdown House, Basingstoke, writes: With conventional suction appliances an accurate estimate of blood loss during operation is not possible because of the length of tube between the nozzle and the bottle, and for the same reason small amounts of blood cannot be measured. The latter consideration is of prime importance where the patient is an infant, and has led me to have constructed the device here illustrated.



The nozzle leads direct into a glass reservoir, capacity 200 ml., which is connected by a stout rubber tube to a suction machine. The reservoir is a graduated bottle of standard type, and therefore readily replaceable, and is of such a size that it can be conveniently held in the hand and used to direct the nozzle to the operation site. Swabbing or washing of the wound would of course invalidate the reading. The apparatus was designed for use in cleft-palate surgery, in which neither of these procedures is necessary. The appliance was constructed by Messrs. Charles King Ltd., of Devonshire Street, London, W.1.

Correspondence

Because of the present high cost of producing the Journal, and the great pressure on our space, correspondents are asked to keep their letters short.

Specialists in Physical Medicine

SIR,—Your leading article on the development of consultant services (November 1, p. 984), and in particular your reference to the need for physical medicine specialists, underlines the inadequate provision made for this specialty in the National Health Service.

Since the war there has been, and there continues to be, a large increase in the number of cases referred for physiotherapy. In one London teaching hospital alone in the last five years the number of patients referred has grown from 6,764 to 11,861 a year. This is an increase of 75.3%, and compares with an increase of 6.7% for the total hospital out-patients in the same period. Although this inundation is derived partly from the new-found popularity of physiotherapeutic treatments with patients and general practitioners alike, it is largely due to the widening scope of physical medicine. This specialty is now responsible for the diagnosis and treatment of many disorders of the locomotor system and the application of physiotherapy and rehabilitation.

To direct existing physiotherapy departments and to continue research work, the present complement of physical medicine specialists is quite inadequate. It is not generally realized that there are only about 60 doctors who possess the Diploma of Physical Medicine. That the Ministry of Health should have thought it possible to maintain the number of consultants in this field at an adequate level by two appointments a year, while limiting senior registrar posts to about 10 for the whole country (H.M. Ref. 94112/1/27), is evidence of its utter failure to appreciate what is required to meet the present situation. Until physiotherapy is fully supervised by physical medicine specialists, with adequate training, we shall continue to spend large sums of money on ineffectual physiotherapy. If more registrar posts are not created, the present number of doctors with five years' or more experience and with qualifications in physical medicine will soon be absorbed into consultant practice. Who, then, will undertake the supervision and training of physiotherapists?—I am, etc.,

HORDER,
President, British Association of Physical Medicine

London, W.C.2.

Geographical Distribution of Cancer

SIR,—I have with interest seen the paper by Mr. C. D. Legon (September 27, p. 700) on the subject of geographical variations in the mortality of cancer. It is often not realized that this discipline dates from 1846, when Walshe reported on cancer figures from London as far back as 1728, and discussed the occurrence of cancer in Algiers, Calcutta, China, Copenhagen, Egypt, Hobart, Massachusetts, New York, and Senegal.

The shortcomings in reliability of the diagnosis of cancer, however, invalidated research of this kind even up to 1939. The elimination of inaccuracy in various diagnoses has made it possible to work out reliable statistics on many types of cancer, although it seems as if gastric cancer may be among the types least accessible to accurate demographic study. In 1950 a symposium on the subject of the geographical pathology and demography of cancer met in Oxford under the auspices of the Council for International Organization of Medical Sciences, and with the president of the latter organization, Professor J. Maisin, in the chair. Britain was represented by Sir Ernest Kennaway, Dr. Richard Doll, Professor B. S. Platt, and Dr. Percy Stocks. This meeting succeeded in making a sketchy survey of variations in the frequency of cancer which may be sug-

gested in various parts of the world, and made recommendation for further study. To produce final evidence is, however, a most complicated matter, since cancer increases in frequency with age, so that it will be necessary to have detailed knowledge on the age distribution of the normal population as well as of the cancer patients before final conclusions can be drawn.

The International Cancer Research Commission has established a committee on geographical pathology which endeavours to promote endemiological studies on cancer in various parts of the world. In July this year a symposium met in Louvain for the discussion of the endemiology of cancer of the lung (*Lancet*, 1952, **2**, 581), and the committee is assisting the International Society for Geographical Pathology in the preparations for a world-wide review of cancer frequency and mortality to be made at a conference in Washington, 1954. It would seem that this field of investigation will deserve far more attention by research than has been given to it in the past by the various bodies set up for research in cancer. It has to be realized that as long as factors causing cancer are described as "geographical" this means that our knowledge of their nature is entirely unsatisfactory. Attention should certainly be paid to observations like those published by Mr. Legon, even if the explanation of the variation may have to be sought in quite unexpected fields of study.—I am, etc.,

JOHANNES CLEMMESEN,
Director of the Danish Cancer Registry.

Biochemical Normals in Healthy Africans

SIR,—Africans often consume an inadequate diet, and parasitic diseases and disorders and the infections which are linked with unfavourable environmental and social conditions are common enough. It is not surprising, therefore, that various abnormalities are encountered among these people—in the biochemistry of the blood protein picture, in liver function tests, in carbohydrate metabolism, in the excretion of ketosteroids, and so forth. The question naturally arises, What are these abnormalities due to? So many factors could be involved—for example, racial differences; acute episodes of unsatisfactory feeding (for example, at weaning time); chronic undernutrition and malnutrition; habituation to a high cereal diet very low in animal protein; chronic malaria, schistosomiasis, or ankylostomiasis; syphilis, tuberculosis, etc. All too often several of these possible influencing factors are present simultaneously—a state of affairs rendering it very difficult to investigate the role of any one of them. There is thus a serious lack of biochemical data on Africans accustomed from birth to a satisfactory diet, and who have been, and are, free from infestations and infections. It is possible, of course, to collect ample information on Africans fed a satisfactory diet for a limited number of years, and Bantu nurses, for example, are being studied at a local non-European hospital; nevertheless, uncertainty of their nutrition in infancy, childhood, and youth, and of the incidence of parasitic and other diseases occurring during this period, precludes them from supplying the fundamental data so urgently required.

With this problem in mind, we have recently visited a small, very isolated group of villages at Tsane, in the heart of the Kalahari Desert, about 300 miles (482.7 km.) north-west of Mafeking, and there we think that we have located an African population which may well provide us with the information in question. Every household owns cattle, goats, and sometimes poultry; in addition, there is plenty of game—springbok, wildebeest, etc.—which is trapped or shot. A good supply of meat, and usually a fair supply of milk, are thus available. Sufficient maize, kaffir corn, and beans are grown to satisfy requirements, at least in seasons of normal rainfall. For vegetables there is tsama, a species of wild melon that is extensively cultivated and eaten both fresh and dried. From the diet consumed it is understandable that the clinical state of the people, particularly the young, was found to be excellent. Furthermore, examination of samples of blood smears, sera, throat swabs, sputa, urine, and faeces provided no evidence of current or, in certain respects, of past infestations and infections. Although these people would appear to be almost ideal for furnishing the biochemical data required, it must be admitted that the rainfall is unreliable, and that droughts cause occasional shortages of certain foodstuffs. There is, however, an African police post at Tsane, the members of which, in addition to receiving their pay, are able to run their kraals and small farms; it is considered that the standard of the diet of such families is likely to be affected little or possibly not at all from seasonal shortages. This would also apply to the families of the larger cattle owners, of whom there are several.

It is our hope to return to the area and by careful inquiry and examination to select subjects (1) that have been very probably habituated to a good diet, and (2) that have lived in the region throughout their lives and thus have probably not suffered from, nor are suffering from, the infestations and infections so very common to Africans elsewhere. We are sanguine, therefore, of obtaining data of the type enumerated above, at least for children and young adults. Such knowledge should allow a start to be made in the assessment of the possible factors influencing the abnormalities listed at the beginning of this letter.

Our initial expedition was made possible by the South African Council for Scientific and Industrial Research, the South African Institute for Medical Research, and the medical authorities of Bechuanaland Protectorate, to whom we are deeply indebted, and with whose permission this letter is published.—We are, etc.,

A. R. P. WALKER.
B. T. SQUIRES.

Johannesburg.

Kwashiorkor in Ibadan

SIR,—During the past four years a large number of cases of kwashiorkor have been seen in Ibadan, Nigeria, and, although conforming to the general picture as painted by the Makerere team (October 11, p. 791 *et seq.*), the following points may be of interest.

Kwashiorkor is called by various names by the Yoruba people, and one of the commonest is "ela" or "licking," referring to the skin rash, which is thought to be due to worms in the body licking off the skin from within. Mild or "latent" kwashiorkor, associated with failure to gain weight, apathy, etc., is well recognized as a dangerous, though common, phase of growth in infancy. It is known as "owowe" or "falling (of the leaves)," which refers to the well-known sparseness of the hair.

The age distribution in Ibadan is fairly similar to that in Uganda. In 1950, of 44 cases treated, 64% occurred between the ages of 18 and 36 months. They did, however, appear to differ in that many were still not completely weaned from the breast when the disease developed, although it seems unlikely that they were receiving more than very little breast milk. In Ibadan, kwashiorkor is commonly found, at least in older infants, in association with infective gangrene of the mouth (cancrum oris), which may itself have a nutritional basis.

The less spectacular skin lesions remarked by the Makerere team were also common in Nigerian cases (that is, deep bleeding fissures behind the ears, etc.; grey circular "slumbering" ulcers). As regards the now classical "crazy pavement" rash, I agree that the emphasis should be, at least in severe cases, on the fact that it consists of a "raw" desquamation—large fine hyper-pigmented flakes peeling to leave a weeping, or at least very thin and pale, underlying skin. In Ibadan, as was noted by Brock and Autret, it is common for this rash to involve the whole body surface.

One cannot help wondering whether the roundworm should not have been mentioned in the discussion on the role of parasites in kwashiorkor. Some 90% or more of children in Ibadan are infected, and, as many hundreds of worms may be present in a single child, interference with protein absorption seems highly probable.—I am, etc.,

D. B. JELLIFFE.

Jamaica, B.W.I.