Sufficient information is now available, as the result of special inquiries, to show that maternal mortality in India is probably five or six times as high as that of England, and when it is remembered that a high death rate implies a correspondingly high rate of sickness, the extent of suffering and invalidism which child-bearing causes in India can well be imagined.

Apart from beds for abnormalities arising during pregnancy, labour and the lying-in period, beds are also required for women whose domestic surroundings are unsuitable.

Increasing numbers of women are now seeking admission to hospitals for confinement, and this demand is being met to a certain extent by the establishment of maternity homes, which are often unsatisfactory from the point of view of equipment and skilled attendance. The movement is, therefore, not without risk, and some control of the standards and methods of these institutions would seem to be necessary if the lives of mothers are to be suitably safeguarded.

Maternity and child welfare schemes are based on a system of home visiting, of ante-natal and post-natal clinics and centres, where infant and pre-school child consultations are conducted and classes can be arranged for the mothers. Each year shows a diminution in the number of so-called welfare centres staffed by untrained workers. The primary objects of maternity and child welfare work are to educate parents in the nurture of a healthy race and to prevent disease, and these objects can be achieved only by the employment of trained health workers.

The trained health visitor is the vital unit in any maternity and child welfare scheme, just as home visiting is the basic service for which she is responsible.

The contributions hitherto made by voluntary organizations and individuals have been of great value, but a stage has now been reached when responsibility for the training of workers and the technical direction of the work should be assumed by governmental departments.

Research activities.—A study has been made for the last four years, and is still in progress, of the organism responsible for cholera, and considerable advance has been made with respect to the identification of the true cholera organism as distinguished from various related organisms found in tanks, rivers and other water supplies all over the country. These investigations have been in the nature of a co-ordinated study in which a number of different laboratories took part and a second form of attack is being made on the problem through field enquiries.

Another important line of study has been that of the rôle of the fly in the causation of cholera. Work on this subject is still in progress in more than one province.

Researches have also been carried out on the problem of malaria. Along with other subjects these included (1) study of the life-history of malaria-carrying mosquitoes, (2) testing of the value of certain anti-malarial drugs, (3) investigation of the conditions under which transmission of the disease takes place, (4) malaria surveys, (5) malaria control experiments in different groups of villages and (6) investigations into the causation and cure of the dreaded condition known as blackwater fever, which is frequently associated with hyperendemic malarious regions.

A serum for the treatment of plague patients has been prepared and is now under field trial. The results so far obtained have been quite hopeful, but further research is required before it can be said that a new weapon has been found for the fight against this disease.

The causes underlying the recrudescence of plague after periods of freedom from infection have been under investigation, present conditions providing a favourable opportunity for such studies in view of the comparatively low prevalence of the disease.

Field studies with cyano-gas have been going on for some time.

Work done in the different laboratories have covered a very large field and has included such widely different subjects as the action of snake venoms, drug addiction, filariasis, cancer, trachoma and epidemic dropsy, to mention only a few.

Hospitals and dispensaries.—The number of hospitals and dispensaries of all classes in British India during the year was approximately 6,900 and the average population served by each institution is nearly 41,000. Whilst the average population served by each institution in urban areas reached the maximum of 20,000 in Delhi Province, the corresponding number of rural areas was as high as 124,000 in the U. P. and 104,000 in Bombay Presidency. These figures indicate the urgent need for an extension of rural medical relief.

Correspondence

A GAS MASK FOR POST-MORTEM WORK

To the Editor, THE INDIAN MEDICAL GAZETTE

SIR,—To those whose lot it is to perform post-mortem examinations on decomposed dead bodies in the hot damp weather it may be of interest to hear that I have found a gas mask of great value in this type of work. It affords complete protection against all foul-smelling gases and permits of a thorough examination in circumstances where ordinarily such examination would be almost unbearable due to foul odours.

The gas mask used has been purchased from the Chief Ordnance Officer, Allahabad Arsenal, for Rs. 17-5-6 plus freight and is the Regulation Army Respirator Anti-Gas Mask IV.

To my knowledge a gas mask has not been used for this purpose before nor is it mentioned in any of the commonly used textbooks on jurisprudence in this connection. This is the justification for sending in this note.

Yours, etc.,

S. AHMAD, M.B., B.S. (Punj.),
F.R.C.S. (Eng.), L.R.C.P. (Lond.),
CAPTAIN, I.M.S.,
Civil Surgeon.

SITAPUR,
UNITED PROVINCES,
23*rd August,* 1938.

ANAHÆMIN IN TROPICAL MACROCYTIC ANÆMIA

To the Editor, THE INDIAN MEDICAL GAZETTE

SIR,—In a paper entitled 'Anahæmin in Tropical Macrocytic Anæmia' published in your July issue of this year, Napier and others refer to my review of the work of Dr. Lucy Wills and her co-workers (1937) which showed that in the nutritional macrocytic anæmias of monkeys the more highly purified liver extracts might be less efficacious than the less purified ones. The quotation ends as follows in inverted comas, 'In the reviewer's experience no clinical evidence of this danger is at present available....' It is unfortunate that the rest of the quotation was not given in the paper and that it was not made plain that my remarks referred to Addisonian pernicious anæmia and not to tropical macrocytic anæmia. The insertion of the remaining lines of my review in the 1938 *Medical Annual* makes this plain, for it continues—'Since, the improvement in the blood and central nervous system changes of his patients with pernicious anæmia has been as great and as quickly and easily produced with the recent highly purified preparation anahæmin as with the less purified preparation campolon'. This is the opinion also of Murphy of Boston who uses the highly purified extract made by the Lederle Company in 1 c.c. doses, and by Ungley of Newcastle and other leading hæmatologists in this country. This statement does not deny the possibility that the less highly

purified preparations might be more efficacious in tropical macrocytic anæmia.

Dr. Napier is working on a very valuable problem in trying to separate the large group of tropical macrocytic anæmias into smaller divisions by means of the therapeutic test. The difficulties are obviously great as judged by the variable and inconsistent responses which are reported in the different cases. It is difficult to compare different liver extracts with one another unless they are both used on a single case because of the variable response which individuals show to treatment. Another difficulty lies in reckoning what should be considered comparable doses of the different liver extracts to be tested; for instance, in case 8 conclusions are drawn in regard to the increased activity of campolon compared to anahæmin when the patient received only 2 c.c.'s of anahæmin as compared to 20 c.c.'s of campolon. Probably the same criticism is applicable to case 9, but unfortunately the number of days on which 4 c.c.'s of campolon was given is not stated.

Lastly, I would draw attention to the fact that batches of anahæmin were placed on the market last year which were of low potency. Some of our cases of pernicious anæmia showed little or no response to 2 to 4 c.c.'s of anahæmin. I understand that the potency of anahæmin at present on the market is extremely high. If therefore Dr. Napier and his colleagues had been so unfortunate as to use a batch of anahæmin of poor quality, this would be another factor in making it difficult to assess the comparative value of different liver extracts in the treatment of tropical macrocytic anæmia.

Yours, etc.,

L. S. P. DAVIDSON, B.A., M.D., M.R.C.P., F.R.C.P.E., F.R.S.E.,
Regius Professor of Medicine,
University of Aberdeen,
Practice of Medicine Department.

FORRESTERHILL,
22*nd September,* 1938.

[We are very pleased to get this opportunity to apologize for what we now see to have been an unjust criticism of Professor Davidson's review of Dr. Lucy Wills' work. The apology is not on account of the incompleteness of the quotation in question; in this matter we had no intention of misleading the reader. The paper Professor Davidson was reviewing was mainly concerned with experiments in nutritional anæmia of monkeys and the arguments in this paper were mostly applied to tropical macrocytic anæmia by analogy, but what we had overlooked was that Dr. Wills and her collaborators had specifically suggested that there might be some cases of pernicious anæmia 'which would either not respond to anahæmin or make a poor temporary response, but would respond to the cruder preparations such as campolon'. This of course makes Professor Davidson's remarks both relevant and necessary.

Another point he raises is in connection with the different dosages. We ourselves drew attention to this weakness in our conclusions. However, other workers have shown that very much smaller doses than we gave, as low as 25 milligrammes, will produce a reticulocyte response in pernicious anæmia. We did not give more than 200 mgm. because at that time our supply of anahæmin was very limited. In case 9 to which he refers, he is correct in assuming that a large total dose of campolon was given (this is clearly shown in the chart which is drawn to scale), but the early reticulocyte response indicated that it was the first or possibly the first two injections that produced this effect.

The last point that he raised was gone into very carefully by myself personally in London when I visited the laboratories of the manufacturers. Our supplies were obtained directly from the agents in India and there seems little chance that any of the samples were of low potency. Further, our findings have been confirmed subsequently by Drs. Wills and Evans.

The manufacturers have generously given me a further larger supply of anahæmin to continue this work. This has enabled us to give larger doses with the result that in a number of cases we have obtained a sharp response, comparable to that hitherto obtained with campolon, though we have also confirmed our previous observations regarding its failure in certain other cases, even when large doses are given.

L. E. NAPIER.]

CONGENITAL ABSENCE OF EYEBALLS

To the Editor, THE INDIAN MEDICAL GAZETTE

SIR,—A girl of 3 days age has been brought to me, as she never opened eyes since birth. I find that the eyeballs are absent. This is a very rare case of congenital absence of eyeballs. This may please be published for record.

Yours, etc.,

ABDUL AZIZ, M.B., B.S., P.C.M.S.,
Assistant Surgeon.

SHAHPUR,
22*nd August,* 1938.

CHLOROFORM AS A LOCAL ANÆSTHETIC

To the Editor, THE INDIAN MEDICAL GAZETTE

SIR,—Using chloroform as a local anæsthetic, I have done about 40 tooth extractions including the digging out of stumps by elevators and the use of the gum lancet, and also opened a few abscesses on other parts of the body. The results have been uniformly good, indeed almost dramatic in some instances for the patient, the onlookers and the operator. The object is achieved in an incredibly short time with but little pain and hardly any other effects.

The method is as follows:—

A piece of lint soaked in chloroform is wrapped round the tooth and gum, or applied to the abscess for about 2 or 3 minutes. This secures sufficient anæsthesia for a quick operation. Those who have used the syringe and one of the novocain preparations for local anæsthesia know how patients dread the 'poke'. Indeed the operation of securing anæsthesia is more painful than the actual extraction or the incision. This is understandable because the tissues are inflamed all round and the slightest touch, and much more a jab, is exquisitely painful. Patients would prefer general anæsthesia, if they were convinced that there would be no danger to life and no after-effects; this is my personal feeling too as a patient. In addition I consider the effects of hypodermic anæsthesia are erratic, varied, and in general unreliable.

How chloroform acts when applied in this method of local anæsthesia I do not know. It seems to me that it acts as a local cellular poison paralysing the end-plates. I have found that ether similarly applied is not nearly so effective; indeed its effects, if any, are evanescent and its use painful, probably due to the contraction of the muscular coat of blood vessels preventing access of the anæsthetic to the end-plates and causing pain by local syncope. Ethyl chloride acts like ether but is more unpleasant.

I am of opinion that unless 'nerve block' is secured by the use of syringe and novocain local anæsthesia by their use is bound to be untrustworthy and painful because it depends entirely on luck for striking the end-plates. Beginning with hypodermic or intra-dermal anæsthesia I have had on many occasions to resort to general anæsthesia. Perhaps, my technique for the production of local anæsthesia by the syringe was faulty.

There is one thing, however, which may tend to take away a little from the usefulness of the method now advocated. Is it not possible that 'suggestion' has played some part in the success that has attended my cases? My first few cases, on whom I used chloroform in this way, may have been exceptionally strong men, quite impervious to pain, and who would not have winced, even if no anæsthetic had been used. Firmly