There are, therefore, contraindications to the use of gas and air analgesia in labour, but only in the abnormal cases. These are: (1) Patients having any heart lesion in which compensation is incomplete. Apart from the physical signs this would be shown by rapid pulse and varying degrees of cyanosis. (2) Patients with pulmonary conditions—that is, phthisis, bronchitis, and other congestive conditions of the lungs. (3) Patients with albuminuria and high blood pressure, who might possibly develop an eclamptic fit.

The apparatus was never intended for the purpose of anaesthesia, so that it is precluded in the ordinary way for any obstetric operation, such as version, the application of forceps, or extensive repair of the perineum.

TRAINING OF MATERNITY NURSES

A course of instruction in the administration of nitrous oxide and air by midwives has been inaugurated in many teaching hospitals, and when a sufficiently high standard of efficiency has been attained a certificate is issued. Consequently, maternity nurses who have obtained this certificate will be qualified to undertake the supervision of the administration of gas and air both in domiciliary practice and in nursing homes. This will enable the practitioner confidently to receive great assistance from the nurse during the earlier stages of the labour.

DETAILS OF RESEARCH

It may be of interest to record the scientific work that was carried out with the assistance of Dr. Hilda Garry in the Liverpool Maternity Hospital in March, 1934, to show that there was no danger to mother or child by the use of gas and air analgesia. Electrocardiograms were taken of a series of patients immediately before and at the end of the administration, and again a day or two later. Dr. Leslie Cunningham, medical officer in charge of the electrocardiograph department of the David Lewis Northern Hospital, Liverpool, kindly reported on these, and stated that they did not appear to be influenced to any extent as the result of the patients' experience.

The alteration in the mother's pulse and in the foetal heart rates, estimated at approximately equal intervals during analgesia, was within normal limits.

A biochemical study was made of blood obtained from a maternal vein and the umbilical cord in a number of patients immediately after delivery, with and without analgesia. The conclusions were that, although the administration of gas and air reduced the oxygen content of the mother's blood, the blood of the umbilical cord did not show any marked alteration.

In January, 1936, the British College of Obstetricians and Gynaecologists published a report on the investigation into the use of analgesics suitable for administration by midwives, in which it was stated that gas and air administered by a similar apparatus to that described was a safe and satisfactory method of producing analgesia. There were certain criticisms concerning weight and bulk, and it is highly gratifying to note that these difficulties have now been removed.

During the last three years the just demands of parturient women for the provision of the best relief available have received greater recognition. As the public grows more "gas-minded" drugs will give way to inhalational analgesia. With the further increase of interest, acquirement of knowledge, and improved organization, the means for obtaining this relief will become still more simple and expedient.

A NEW RADIOLOGY DEPARTMENT IN EGYPT

BY

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The Pyramids at Cairo are known throughout the world and to many they symbolize Egypt. Not so well known is the progress made in many modern spheres under the dynasty of Mohamed Aly the Great. The Ministry of Education, which recently celebrated its centenary, provides a striking example of the advance made with the help of extensive European guidance, and the development of the Egyptian University over the last twelve years has been extremely rapid. The Faculty of Medicine, which includes the old Kasr-el-Ainy school and hospital, is building on an island in the Nile what probably will be when completed the largest teaching hospital in the world. In 1922 an international competition resulted in Messrs. Nicolas and Dixon Spain of London being chosen as architects.

The foundations of the whole hospital were completed in 1930, and about 400 beds are now in use. The radiology department as planned in 1922 was found to be smaller than was required by the increase in the work. At my suggestion it was replanned in 1930, the electrotherapy accommodation removed elsewhere, and a new story added to the building. In 1932 the plan was further modified to include two wards pending the completion of the whole hospital. In 1936 a start was made by the reception of patients. In this hospital, as in Sweden, radiologists have clinical charge of beds, and forty-three beds are now (May, 1937) occupied by patients receiving treatment by radium or x rays, or both these agents. There are five radiologists on the staff of the department, three of whom hold the Cambridge diploma, while an assistant surgeon is delegated from the department of surgery to act as surgical specialist. In addition, radium is available to such of the surgical or gynaecologist staff as wish to employ it, but its use in this way has been mainly by the ear, nose, and throat staff.

Lay-out and Equipment

The department occupies part of the first and the whole of the second floor above the out-patient accommodation. On the first floor are situated lecture theatre, museum, photographic dark room, film stores, patients' waiting rooms, workshop, and typist and filing clerk and technicians' rooms. The second floor has the shape of a capital T, the top of which is principally for diagnostic radiology. The stem of the T is for therapeutic radiology. The diagnostic section has barium insulation and rubber flooring, and includes an electrically refrigerated dark room. All rooms used for patients (except the wards) have electric heating. There are screening rooms and two radiographic rooms. Of the four rooms three are equipped with two tables, making seven tubes in all. One of these is of rotating anode type. By means of electrically interlocked and operated switchgear, designed by me and made in Cairo by kind permission of the Director-General of the Physical Department, each of the four control tables in the four x-ray rooms on the low-tension side and the corresponding x-ray tube on the high-tension side can be connected to either a six-valve or a four-valve generator. Both generators can be employed simultaneously. This system, which is believed to be original and which saves almost the whole cost of two generators, facilitates the repair of faults, as each generator acts as a stand-by for the other. All the apparatus is shock-proof, the generators being situated in a machine room upstairs, and cables are led through the ceilings to the x-ray tubes. A dental apparatus of the new self-contained type is also in use for the work of the dental school.

Treatment by Radiation

For therapy a superficial treatment apparatus working at 80 kV and a short distance (Chaoul) apparatus have been in use over the past year. The latter in my opinion seems likely to displace radium for superficially situated easily accessible small growths by reason of its advantage in cost and convenience to the patient. For deep therapy at 200 constant kV there are two tubes operated from a modernized Weifa apparatus, placed in a machine room above, and a constantly evacuated tube (Metropolitan-Vickers) working at 250 constant kV. A further room awaits equipment, the 1930 plan mentioned above providing for six deep-therapy rooms. These rooms are lined with lead tiles, cast locally, and interlocked with each other. All this apparatus is shock-proof. There are also rooms for the staff and for physical and measuring and biophysical laboratories, but these latter are not yet equipped or staffed.

The two wards, male and female, of twenty-eight and fifteen beds respectively, are named in honour of Roentgen and the Curies. There is a theatre for implantation and the minor operative work associated with radiation treatment, a clinical laboratory, a radium applicator preparation room, and a radium-beam apparatus in a room adjacent to the radium safe.

The light-weight radium-beam apparatus was designed by me and made by the Solus Electrical Company, London, in 1935. Of experimental type, it will be described in detail elsewhere, but, in short, it permits the automatic electric conveyance of the radium from the inside of the safe to the patient with the operator at twenty feet distance. Here the radiation is within the assumed tolerance. The weight on the patient is only a few ounces, and movement on his part over a few inches does not alter his position with regard to the radium. Gold is used to reduce the amount of lead protection employed. The unit at present is $2\frac{1}{2}$ grammes, but the apparatus has been designed so as to make later a 5-gramme unit.

Recently the number of patients treated has been at the rate of 800 per year. Most are cases of malignancy, and of these the great majority were suitable for treatment only by x rays. The numbers treated are increasing, and use of the "shift" system, as in many places abroad, should result in more economical use of the plants.

Progress since 1923

When I came to Egypt in 1923 Kasr-el-Ainy Hospital possessed one x-ray room; very little treatment was possible, and the diagnostic examinations numbered 1,600 a year only. In 1936 about 43,000 were made, principally in the old hospital. The development that has occurred has been considerable, but much remains to be done. Under the Anglo-Egyptian Treaty, so advantageous in many respects, heavy defence expenditure will be incurred and progress may be slower towards solving the problem of training the radiologists required for a population of fifteen millions and who at present number less than one per million. It will probably be many years before the chair in medical radiology approved by the Ministry of Education in December last is created in the university.

We are informed that a law to be enforced immediately in Buenos Aires will necessitate the production by the bridegroom, before marriage, of a certificate stating that he is free from any venereal disease which might be transmitted to his wife. The certificate, for which there is no charge, is to be presented to the civil authorities. The law does not apply to women, and includes clauses providing for the closing of houses of ill fame and for the "compulsory hospitalization of refractory cases of contagious infection."

OUTBREAK OF FOOD POISONING IN LONDON

GAERTNER BACILLUS ISOLATED

On August 25 it was announced in the Press that there was an epidemic of food poisoning in St. Pancras and Finsbury, about forty cases having been traced, with one fatality. It was announced later that the source of the poisoning had been traced to a shop in Finsbury and that gammon was the offending foodstuff. An inquest was held on August 27 into the deaths of two patients thought to be due to food poisoning. The inquest was adjourned until September 2, when it was stated that H. Horsman, aged 73, and Mrs. Billingham, aged 54, had died from acute enteritis due to bacterial food poisoning, and that W. Tonbridge, aged 43, had died of acute bronchopneumonia as a result of a Gaertner infection. Dr. Albion, a medical officer of the Ministry of Health, stated that he had examined samples of cooked and uncooked gammon and other food from the shop in Finsbury and had found the Gaertner bacillus in some of the food: in a cut from the centre of the uncooked gammon there was no sign of it. For the following account we are indebted to Dr. Percival V. Pritchard, deputy medical officer of health for St. Pancras.

The Beginning of the Outbreak

A full account of the outbreak of food poisoning in St. Pancras and Finsbury cannot be recorded at this stage. Cases are still coming to notice and the investigations which must of necessity be made are still incomplete in many respects. Meanwhile a brief account can be given of what has happened in St. Pancras.

On Monday, August 23, three cases of food poisoning were notified. This is a notifiable disease in London. My inspector found a fourth case during his investigations. All four had partaken of cooked food bought on Saturday, August 21, from the same shop in Finsbury. This information was given to the medical officer of health for Finsbury so that he could deal with the shop which seemed to be the source of infection.

Three of these patients were ill within nine hours and the fourth within thirty hours of eating ham or corned beef, or breakfast sausage. The symptoms were very severe abdominal pain and diarrhoea with marked prostration; vomiting was delayed for several hours and was not severe; there was a mild degree of fever.

Further Investigations

On August 24 Dr. N. D. Dunscombe, M.O.H. for Finsbury, told me about a case of the poisoning which had been brought to his notice in his investigation of the shop. This person, Mrs. S., worked in St. Pancras and lived in Islington. We found that she, her husband, and two daughters had all eaten ham bought from the shop under investigation and that with the exception of the husband they were all suffering from symptoms of food poisoning. The case was made difficult at first by the fact that the woman denied having eaten anything from the shop. This was seemingly done as an act of kindness to the shop. The truth, however, was eventually forthcoming. The daughters were at home ill and the M.O.H. for Islington was accordingly told of the circumstances. He visited and continued the survey. Mr. S. was not ill in any way, although he had had ham with his family. As a result of questioning Mrs. S. we found three more cases at her place of work in St. Pancras. These people had bought ham from the same shop on Monday evening and were ill within nine, twelve, and nineteen hours respectively after partaking of it. They showed the symptoms which have been common to most of the cases.

On Wednesday, August 25, Mr. Wilkie of the St. Pancras Hospital informed me of the death of a patient, Mr. Horsman, who had been admitted to the hospital on the previous Sunday