

Centrigrade). In the Lindner method this is replaced by a comparatively simple process in which the glands are chemically dehydrated and can thus be stored or transported for several days at room temperature without damage.

The new method obviates the need for expensive refrigeration plants, reducing the installation costs, and thus permits the recovery from small slaughterhouses of most of the glands which otherwise are wasted for lack of cold storage facilities. As a result, the quantity of glands available for the production of insulin has been multiplied. In a letter addressed to government members of the Organization, Dr. Brook Chisholm, Director-General of W.H.O., recommended that the new method be put into operation wherever possible and that countries where insulin is not extracted put their own supplies of unused pancreas glands at the disposal of insulin producing-countries.

Requests for information on the new process have poured in from many countries, especially from public health authorities, hospitals, doctors, pharmacists, drug manufacturers. The World Health Organization has released all the information available in a supplement to the monthly CHRONICLE OF THE WORLD HEALTH ORGANISATION.

The world-wide shortage of insulin has been a matter of considerable concern to health authorities everywhere and to the World Health Organization in particular. At the request of member governments, the Interim Commission of WHO initiated several months ago an International survey of insulin consumption and production covering 46 countries. This survey is being continued now by decision of the first World Health Assembly which met in Geneva June 24 to July 24, 1948.

Information received to date indicates that demand far exceeds supply and that the majority of countries experience difficulty in obtaining adequate supplies of insulin. Several factors contribute to the present shortage; insulin factories have not been able to procure the necessary pancreas glands; present currency restrictions have hampered normal commercial relations, while more efficient methods of diagnosis of diabetes and the greater number of surviving diabetics have increased the demand.

It is expected that the demand will continue to increase over the next few years as a result of improvements in public health organization and dietary factors. At present, thirty-five of the forty-six countries which replied to the questionnaire sent out by WHO stated that they were not self-sufficient in regard to insulin supplied.

Attempts to produce a synthetic substitute for insulin have so far not met with success. Hence, the only immediate prospect of increasing insulin supplies rests with the Lindner process.

S. N. A. PAGE.

CEREBRAL ANOXIA

I have had the unusual experience of helping to care for a patient with Cerebral Anoxia. On Monday the 27 December 1948 at 9. a. m. Mrs. Kamalam of Chingleput aged 24 was brought to our Gynaecology "D" Ward on a wheel chair. She was accompanied by her mother and father-in-law. Her husband died 10 months ago of unknown cause. She has 2 daughters and 3 sons.

Her chief complaints on admission were (1) A mass in the abdomen which was growing rapidly since 2 months. (2) Burning sensation in the epigastrium. With these complaints she came to out-patients department, where she was examined by the Gynaecologist and advised operation.

Routine pre-operative care was given. Injection Morphia gr. 1/6 and Atropine gr. 1/15 was given at 6.30 a.m. in order to lessen pain and accelerate the effect of the Anesthetic. Atropine helps to decrease the secretion Ephedrin gr. 3/4 given at 7 a.m. to counteract the depressant effect of spinal anesthesia on B.P. Patient was taken to the operating theatre at 7.45 a.m. accompanied by a nurse, who stayed with her until anesthesia was given.

A spinal anesthesia of Nupercain 3 c.c. given in a sitting position. Operation began. After opening the abdomen doctor found it to be a papillary cystadenoma of Ovary which was very large with extensive firm adhesions. Adhesions were broken and the cyst removed. Abdomen closed after inflating Sulphanilamide powder into the peritoneal cavity.

While the patient was on the table during the operation, she developed Cerebral Anoxia, which is a condition of damage of cerebral cells due to lack of oxygen. After the abdomen was opened the anesthetist noted that the patient was becoming cyanosed and she thought the condition to be due to depression of respiratory centre. Before oxygen inhalation could be given the patient stopped breathing completely. In Cerebral Anoxia either Cardiac, respiratory or both centres may be paralysed. The immediate treatment that is given in case of Cardiac arrest is Cardiac massage either direct or indirect. If the Surgeon is working on the abdomen, he may catch the heart directly and squeeze it in order to help increase the peritoneal circulation to the brain. The nurse in the theatre should be ready with a sterile syringe with needle and adrenalin.

An injection of adrenalin will stimulate the heart. In case of respiratory arrests artificial respiration is given. This was done for this patient.

Patient was received in an unconscious state in a warm Fowlers' bed at 9.45 a.m. The foot of the bed was raised on blocks. Oxygen inhalation given continuously. B.P. taken $\frac{1}{2}$ hourly. Pulse and respiration recorded $\frac{1}{2}$ hourly. Pulse 120-156. Respiration 4-0 per minute. Bag breathing given 1 hourly for 5 minutes. She started to have convulsions from 11.4 a.m. till the evening. Physician was called in, who after examining prescribed Rectal paraldehyde 3 IV, which was given with Normal saline 8 ozs at 5 p.m. Injection penicillin 30,000 units 3 hourly. Intramuscularly given for 2 days (Total of 420,000 units) intravenous Gelatin 1 pt. was given to raise blood pressure.

By 4 p.m. the respiratory rate had increased to 30 per minute. Temp: 100.8-pulse 120. Patient was unconscious for that whole night.

From 29th Intravenous plasma 1 pt., Gelatin 2 pts. Calcium Gluconate 50%, 10 cc given on alternate days till 10th January. Convulsions occurred at long intervals and lasted for 3 days.

Did not void after operation. Hot and cold irrigation given, and hot water bottle applied over the bladder, but all proved to be a failure. So she was catheterised on 29th at 11 a.m. and again on 30th 5 a.m. Self retaining Catheter was left in to prevent repeated Catheterisation and danger of cystitis. The Catheter was in for 7 days, after which she had incontinence of urine for 4 days.

Bowels not opened on the 29th, and 30th. On 31st she had incontinence of faeces. Later on from 1st January bowels moved regularly.

Patient regained consciousness after 72 hours. But she was very restless and shouted loudly. She tried to get out of bed, so a wooden board was kept along the length of the cot to prevent her from falling down. The nurses had to watch her very carefully. Injection: Luminal gr. 1 was given intramuscularly whenever she was restless. Medical attendants had very little hope of her recovery. She could not speak or swallow. Tube feeding given for 5 days.

Daily warm sponge was given. Mouth wash given with potassium Permanganate and hydrogen peroxide, boro glycerine was applied to lips. Patient's position changed frequently to prevent hypostatic Pneumonia. Pressure points attended to and skin kept clean and dry.