The Present Status of the Surgical Treatment of Primary Carcinoma of the Lung. Rieuhoff, W. F. (Journ. Amer. Med. Ass., 1944, 126, 18).—It is now twelve years since the first total pneumonectomy was performed for primary carcinoma of the lung on a patient who is still alive and engaged in active work. The author here makes a clinical analysis of 181 consecutive cases of primary carcinoma of the lung in which operation has been performed. Seventy-one of these cases on exploration proved to be operable, 110 unoperable. There was a much higher incidence in men than in women (6 : 1) but the age incidence was not very different from that of carcinoma elsewhere in the body, 64 of the patients being in the fourth to sixth decades.

The chief symptom in 61 per cent. of cases was cough, often associated with haemoptysis. Pain in the chest of a dull aching character was noted in 50 per cent. of patients. Loss of weight was striking in 39 per cent., paroxysmal hyperpnoea was noted in 23 per cent., and 18 per cent. suffered from attacks of fever with atypical physical signs in the chest. In the 181 cases, X-ray was positive in every instance. In 61 per cent. bronchoscopic examination revealed the presence of bronchogenic carcinoma. The author believes that exploratory thoracotomy should be performed much more frequently. No deaths and no complications followed such a procedure in 25 of his cases.

The surgical removal of primary carcinoma of the lung at a very early stage has brought about changes in our ideas of the growth of such tumours. The majority occurred near the hilum, many penetrating into a bronchus, causing cough, sputum and haemoptysis. A minority arose near the periphery, the signs and symptoms to which they gave rise being dependent on invasion of the pleura and chest wall and direct extension to the brachial plexus. In 70 per cent. of the 71 cases there were metastases to the bronchial and tracheal nodes. Sixty-four per cent. of the tumours were flat or squamous celled, 36 per cent. were adenocarcinomatous in type.

Of the 71 pneumonectomies performed there were 15 deaths (21 per cent.)
Surgery

post-operatively from varying causes. The death rate improved throughout the series with better surgical and anaesthetic technique and the introduction of penicillin.

Twenty-five patients (35 per cent.) are still alive. One has lived for 11 years, one for 9, and three for 7, and all are restored to normal activity. Forty-four (31 per cent.) lived for one month to five years, and the majority of these were definitely improved, being relieved of cough, hæmoptysis, and extensive pulmonary suppuration.

It would seem, therefore, that surgical removal of the entire lung had proved a satisfactory means of treatment of an otherwise fatal disease. Post-operative mortality and longevity are at least as good as the results following surgical removal of carcinoma of other organs.—JANE H. MERRY.

Use of Insulin and Abuse of Glucose in Treatment of Diabetic Coma. Howard F. Root (Journ. Amer. Med. Assoc., 1945, 127, 557.)—The writer lays down the underlying convictions which have enabled him to claim, during the last four years, a mortality rate of only 1·6 per cent. among 123 consecutive cases of diabetic coma. He regards this condition as an emergency caused by an acute deficiency of insulin, and therefore he treats it by giving large doses of insulin to enable the body to utilise the glucose present in the blood and tissue fluids, to restore glycogen depots, and to provide energy for the body by oxidation of carbohydrate instead of fat, so stopping excessive ketone production. An average of 216 units were given in the first three hours, because the value of insulin is greatest early in treatment, and an average of 250 in 24 hours.

Determinations of total acetone bodies in the blood are listed, but the author has found the estimation of the carbon dioxide content of venous blood to be of more value in determining the imminence of lethal irreversible changes in the central nervous system.

Since the problem of treating diabetic coma is that of converting large amounts of unused and unusable glucose in the body into glycogen and energy, the author believes the administration of 50 gms. of glucose (a common practice) to be harmful, because (1) no more than 5—10 gms. carbohydrate need be oxidised per hour to check ketone formation, (2) glucose neutralises the action of insulin, (3) excessive hyperglycaemia is harmful to the pancreas and to the liver, and (4) excessive glucose in the blood and tissues will result in anuria.

Finally, the author outlines his scheme of treatment, namely warmth and the administration initially of 50—100 units of insulin, and with blood sugar levels at over 600 mgm. per cent. 200—300 units in the first three hours. He stresses the importance of giving large doses of insulin immediately, and emphasizes the place of parenteral fluid where there is shock and dehydration. Another important aid in treatment is gastric lavage, with removal of the stomach contents, which are often stained black because of bleeding from the gastric mucosa. Food and dextrose are not given until the falling blood sugar indicates that they will be utilised.—JANE H. MERRY.