

TUBERCULOSIS DISPENSARIES.

BY LIEUT.-COLONEL S. E. EVANS, I.M.S.

PART IX.

DIET. Bread induces a scanty prolonged gastric secretion of strong peptonising power to deal with the vegetable proteins which are difficult to digest. By mixing extractives with bread or with cooked meat from which all extractives have been removed it can be shown that they have a very powerful stimulating effect on the flow of gastric juice. Fat depresses gastric secretion but calls forth an abundant supply of pancreatic juice rich in fat-splitting ferment. It is liable in excess to enclose protein particles, interfere with their digestion and absorption and produce decomposition and flatulence. Milk in virtue of the fat it contains depresses gastric secretion. It should therefore not be given till the summit of the secretory wave is passed. Starchy food calls forth an abundant salivary secretion rich in ptyalin, is a feeble stimulant of the gastric secretion, and does not stay long in the stomach.

It has already been pointed out that 'dyspepsia' is often one of the earliest symptoms of pulmonary tuberculosis. Very few patients indeed have perfectly healthy digestions. Dr. J. J. Galbrait has found that the outstanding features of the gastric secretion in these cases is a 'marked deficiency of mineral acid and a low peptonising power' permitting gastric fermentation and flatulence and, since it fails to produce the necessary stimulus (acid) for the production of abundant pancreatic secretion, tending to induce intestinal dyspepsia.

The clinical manifestation of indigestion in a tuberculous patient may be gastric or intestinal or both. The symptoms of gastric dyspepsia are too well known to require detailing. Intestinal cases are characterised by morning rises or exacerbations of temperature, which often takes the form of recurrent attacks with quiescent intervals, probably due to the absorption of the toxic products of nocturnal decomposition in the intestine; the presence of decomposition products in the urine; and intestinal flatulence, headache and depression coming on some hours after food.

The dietetic treatment of cases with healthy digestions or with only slight symptoms of dyspepsia and of more severe cases after the restoration of their digestive function is conducted on ordinary lines. Aerotherapy is the best tonic to the appetite. The diet should contain enough oxidisable material (carbohydrates, fats, and proteins) to replace energy lost in heat and work and rather more protein than is necessary to repair tissue waste. These points will be found fully discussed in works on physiology and hygiene but it may be stated here as a warning that the liberal supply of protein advisable in tuberculous cases necessitates a relative diminution in fat and carbohydrates, for there is a limit to the number of calories an individual can dispose of in a day. If the limit be exceeded bilious attacks are the results. This is

another way of saying that the patient must have a more liberal diet than before his illness, that this liberality must be especially marked in meat and eggs, but that the old system of 'stuffing' is to be carefully avoided. The chief articles of diet should be 'milk, eggs, butter, porridge, fish, chicken game, mutton, raw meat, vegetables, mild bacon, ham, well-toasted stale bread, and preserves. Greasy soups, cold meat, tinned meat, and sausages are to be avoided (Halliday Sutherland). Elegant cooking and serving up helps to stimulate the appetite juices. Meals should be taken at regular hours, separated by long intervals, so as to give the stomach regular periods of rest. 9 a.m., 1 p.m., and 7 p.m., are suitable times and the last meal should be the lightest in the day.

For gastric dyspeptics the following is both dietetic and therapeutic: One or two raw eggs, swallowed whole and unaccompanied by anything else, on an empty stomach, half an hour or more before breakfast, and a glass of very hot water, drunk slowly in sips, half an hour to an hour before the other two meals. The reasons for this have already been gone through. Raw meat alone or in addition to cooked meat should be given at each meal. It should be finely minced, all fat and fibre removed, and either mixed with warm meat extract to the consistency of gruel or served up with bread crumbs. In two or three days when digestion has improved milk may be added to the dietary. It should be given two hours after a meal as the fat which it contains inhibits gastric secretion. The next step is to order bread or milk puddings and finally to return to normal food always remembering that an occasional return to the above dietary helps to keep the stomach functioning. If the patient will not tolerate raw meat then meat juice, extracted with water or saline, in quantities representing a pound or more of beef, must be substituted. Cases of incessant sickness are most strikingly benefited by the raw meat or meat juice prescription. The best way of treating intestinal dyspeptics is to inoculate their intestinal tract with lactic acid organisms. This is done by placing the patient on a pint of lactic acid milk every two to four hours according to circumstances for one or two days. The immediate effect of the treatment is to bring down the temperature and remove the other symptoms. The ordinary diet can then be gradually returned to keeping however to lactic acid milk instead of plain milk.

In all dyspeptic cases the quantity of food is regulated by the gastro-intestinal condition. As this improves the amount is increased till the diet represents the full caloric value. Every case should have the teeth and mouth carefully attended to.

(To be continued.)