

## Clinical Notes on Some Common Ailments.

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### DYSPEPSIA.

We now come to a condition which is so common as to number almost every one at one time or another—and certainly every nurse—amongst its victims, namely, dyspepsia, or indigestion, as it is popularly called.

It is a difficult subject to treat in a short paper, for it has been complicated by an enormous mass of literature, and different writers have attempted to elucidate matters by calling the same thing by as many different names as possible, with the result of making the confusion worse confounded. In reality, however, the matter is simple enough if we omit names altogether, and keep before our minds the central fact that indigestion, whatever its cause, simply means that the food stays longer in the stomach than it should. We will then try to see the reasons for the delay, and how the patient can best be treated in each case.

In this endeavour we are helped very considerably by certain experiments that have recently been made on animals, and also by the results of administering to patients meals containing various articles of food, and then removing the contents of the stomach at different intervals with the stomach tube, and investigating by chemical tests the extent to which digestion of the food has taken place. It is true that delay in the conversion of the food into the nutritious part of blood—which is, after all, the object of digestion—may be due to faults in some other part of the alimentary canal, but this is comparatively rare, and need not concern us in this article. We will also leave out those cases in which the delay is due either to organic disease of the stomach, such as ulceration or cancer, or to any mechanical obstruction to the exit of food into the intestine, due to a growth or adhesions round or inside the organ itself.

Having thus cleared the ground somewhat, we have next to consider what happens in the normal person when an ordinary meal is taken. Assuming that it is properly masticated—and very many cases of indigestion are due to either carious teeth or to the modern custom of the "quick lunch" or the "theatre dinner"—the food meets in the stomach with gastric juice, which consists of a ferment, pepsin, and an acid, hydrochloric acid. The object of gastric digestion is twofold—first, and most important, to reduce all the food to a pulpy mass, so that it may pass easily into the

intestine; and secondly, to convert proteids into soluble peptones, the starch, sugar, and fat in the food remaining (chemically) unchanged.

Now, much of the confusion in which the literature of dyspepsia is wrapped is due to the fact that it was formerly thought that the main part in gastric digestion was played by the pepsin, and that the acid only helped the ferment to do its work of conversion, but in the light of recent research it appears that the hydrochloric acid is the more important of the two constituents of the gastric juice. In fact, the real work of conversion of the food is done by the pancreatic and intestinal juices and by the bile in the small intestine, but if the food does not enter the intestine properly prepared by the stomach, trouble ensues.

Properly speaking, therefore, the hydrochloric acid serves two purposes—it assists in the breaking up of the food so that all its constituents are exposed to the action of the intestinal juices when it leaves the stomach, and it acts on a substance which is present in the intestinal walls (called pro-secretin) to form another body (called secretin), which so stimulates the pancreas that it pours out its pancreatic juice, which converts not only proteids into peptones but starch into sugars and fats into an absorbable mixture of soap and fatty emulsion.

If, then, hydrochloric acid is not formed in sufficient quantity in the stomach, there is none of it left to stimulate the production of pancreatic juice, and if it is present in excess the food has to stay in the stomach until sufficient bile (which is alkaline) has been poured out by the liver to neutralise that excess; in both cases, therefore, the food stays too long in the stomach.

In addition to this, when the glands of the stomach are not acting properly—whether acid be deficient or in excess—they secrete a large quantity of mucus, which adheres to the food and prevents the proper access to it of pepsin in the stomach, and of the intestinal juices later on.

We can now divide cases of (functional) dyspepsia into those due to the presence in the stomach of too much hydrochloric acid and those where it is deficient, and we find in practice that these types of indigestion occur in very different kinds of people; in fact, the clinical distinction was recognised long before the pathological reasons for it were understood.

Unfortunately it is a little difficult to give to the two conditions names which shall be sufficiently brief and yet indicate the nature of the distinction between them. At present

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