

tations that we have not as yet alluded to. Among the frequently encountered are plethora, anæmia, dyspepsia, and gout. We have already seen that an overtaxed heart becomes irritable. So in a certain way do we find the heart of an individual whose blood is in excess. The muscular fibre of the heart is unduly excited, the origins of the pneumogastric trunks receive too much blood, and there are frequent and violent palpitations as a result of the preceding conditions. These symptoms are apt to occur among individuals who, for one reason or another, have abandoned active and abstemious habits of life for those of ease and self-indulgence. There is no more prolific source of functional heart trouble than an anæmic state. We are constantly encountering it in city practice. Numerous causes may be assigned for the presence of anæmia, but once present it will often become the source not only of cardiac palpitations, but also of many secondary phenomena, which indeed appear to be very similar to those we find in connection with organic heart disease. The prognosis and treatment being so very different in these two conditions, it should make us very cautious in affirming our diagnosis. Usually, functional heart disorder, due to anæmia, is accompanied by numerous other symptoms which fully establish its etiology. Such are headache, intercostal neuralgia, cold extremities, leucorrhœa, etc. Palpitations are often aggravated, if not directly occasioned, by the presence of atonic dyspepsia. Wind accumulates in the over-distended stomach after a meal, and soon the heart is pushed aside and its circulation is directly interfered with and becomes markedly laborious. This same mechanism will account for cardialgia which is so apt to show itself in hysterical women during a paroxysm. In both cases the immediate exhibition of a carminative, such as the compound tincture of lavender, aromatic spirits of ammonia, or melissa water, will, by bringing up the wind from the stomach or causing it to be belched, give almost instantaneous relief. In speaking to you at a previous lecture of the effects of gout upon the capillary system, I pointed out to you how sudden palpitations might be produced in a wholly unexpected manner, owing to spasm of the arterioles. Formerly this effect upon the rhythmic beats of the heart was presumably due to an accumulation of lithic acid in the blood, and even in the last edition of the work of your eminent Professor of Practice it is thus described. But within a few years, thanks to the distinguished researches of Sutton and Sir William Gull, but more especially of George Johnson, of King's College, London, it is now accurately determined that there is hypertrophy of the muscular fibres in some cases, of the fibrous tissue of the walls of the arterioles in more numerous instances, and of a combination of both changes in a very limited number of examples, which accounts for gout palpitations. Doubtless uric acid is still to be found in excess in the blood, but it does not seem to be the proximate factor in

causing spasm throughout the capillary system. This once again is due to an evident, determined pathological lesion. Why it is that gouty palpitations come on during the night particularly I am not prepared to say. After all, in the consideration of cardiac palpitations, we must not lose sight of the fact that cardiac excitability varies very much with different individuals: some there are whose heart palpitates from even the slightest emotions; others bear with the greatest stoicism, or rather most perfectly calm, quiet circulation, all sorts of sudden shocks or dreadful occurrences. All the causes which affect merely the rapidity and force of the cardiac action, influence it through the sympathetic system; those which act through the pneumogastric alter the rhythm of cardiac movements. This is distinctly shown by the results of the experiments of sectioning these nerves.

While we can separate in our experiments the control which belongs to each system of nerves, this is not always possible with certain morbid agencies. The symptoms present often show conclusively that they have acted through both systems. While the nervous trunks no doubt usually carry the impressions and modifying stimulus to the heart, it is often true that the nerve-centres themselves are primarily disturbed.

Apart from the symptoms which can be localized, and, therefore, attributed to the heart directly without much reason for uncertainty, there are many general symptoms which manifestly must differ according to the different cause or pathological relations of the cardiac disturbance.

(To be continued.)

DIABETES INSIPIDUS TREATED WITH ERGOT.

In the *British Med. Journal*, Dec. 25, 1875, is recorded the case of a man who suffered from diabetes insipidus, and was successfully treated with ergot, after the failure of jaborandi and other remedies. Half a drachm of the liquid extract of ergot, every three hours, reduced the urine in twenty-four days from twenty pints to a pint and a half, increased its specific gravity from 1,002 to 1,017, and removed the excessive thirst and other distressing symptoms from which he had suffered for two years. A few days ago the reporter of the case, Dr. Murrell, accidentally met the patient and was told that he had never had a day's illness since he left the hospital, four and a half years ago. His urine was normal in quantity and he did not suffer from thirst. He was strong and well in every way, and able to do a good day's work. The ergot cured him completely, and Dr. Murrell adds that it is to be regretted that this mode of treatment is not more commonly employed in these cases.—*The Brit. Med. Journ.*, May 8, 1880.