A CASE
OF
SLOW PULSE WITH FAINTING FITS,
WHICH FIRST CAME ON TWO YEARS AFTER AN
INJURY OF THE NECK FROM A FALL;
WITH OBSERVATIONS.

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A GENTLEMAN, aged sixty-four, in December 1834, whilst hunting, fell from his horse on his head, with his chin thrown violently on his sternum. He was stunned, and on recovering himself, he said that he "had broken his neck." He was attended by Mr. Dix, of Long Buckley, in Northamptonshire. He complained of general soreness and stiffness, and of great pain in the neck about the cuneiform process and condyles of the os occipitis. He was helpless and could not move in bed, and was totally unable to rotate the head. He was cupped, &c., and the head supported by an air-collar.

The pain in the neck continued about six weeks.

At the end of three months he was enabled to be removed to London, and was seen, I believe, by Mr. Keate. Mr. Dix saw this gentleman about a year afterwards, looking very well, and in excellent spirits, but still complaining of a difficulty in moving the head.

There was no further particular observed in this case until January 1837, when he had a fainting fit, whilst walking out. Mr. Jackson of Stamford was sent for, and he found the pulse at twenty in the minute.

In the same year, after having been at the Spring races at Newmarket, and excited, and having fasted for several hours, this gentleman had a second fit.

In the following June, after a similar excitement, he had another attack. At this time he was attended by Dr. Mitchell, and his pulse was then twenty-five in the minute.

When I first saw this gentleman in March 1837, his pulse, when he was free from excitement or casual disorder, was thirty-three, but it was easily altered. Mental excitement usually increased it, and, in general, this was followed by a corresponding slowness of the pulse, and often by a fainting fit; and a sudden rise of the pulse, or even a gradual increase above the point, that might in his state be called his healthful standard, usually indicated mischief, and was found to be a bad symptom. Costiveness, and disorder of the stomach and bowels, always affected the pulse, by increasing or diminishing it, and were the most invariably exciting

causes of a fainting fit. Gout, to which he was very subject, was another cause.

The general character of the pulse, when he felt well, and was free from disorder, was firm, full, and free; sometimes quite regular, sometimes intermittent.

The attacks increased in frequency as well as in degree, as time advanced, and the first most severe and alarming *succession of fits* occurred in June 1838. On the previous day, this gentleman had eaten heartily of a variety of substances at his dinner, and on the following day about one o'clock P.M., syncope came on, and a succession of fits continued till half-past six or seven in the evening, with intervals of one or two to fifteen minutes between the attacks. I gave him brandy and other stimuli, without stopping or even abating the fits; on the contrary they seemed to increase the mischief, for they made him sick, and disordered his stomach. His pulse on this occasion sunk considerably; it chiefly ranged between twenty and fifteen per minute, but at times it fell to twelve, ten, nine, eight, and at three or four different times when the patient was quite sensible and not in a fit, I counted his pulse as low as seven and a half in the minute. Dr. Mitchell on a subsequent occasion also observed this very low state of pulse, as did Mr. Cullen, who was then acting as my assistant.

If the finger were placed on the radial artery, the approach of a fainting fit might always be known, sometimes for a second or two before it manifested

itself by any change of the countenance. The pulse would cease before the syncope took place ; and the fit would continue till the heart again beat, when the face would redden and consciousness return with a wild stare and occasionally a snorting, a slight foaming at the mouth, and a convulsive action of the muscles of the mouth and face.

The frequency of the attacks was uncertain. Sometimes the patient would have two or three in a day, sometimes one in two or three days, at other times one in a week : sometimes one in a fortnight, or three or four weeks. Sometimes the fit would be severe and all consciousness be lost, at other times there would be a mere threatening or giddiness.

Stimulants, nervous and antispasmodic medicines, were had recourse to, for the purpose of warding off the attacks, but without any marked advantage, and the treatment that was found at length to be the best, consisted in carefully regulating the bowels, preventing the formation of acid in the stomach, giving a plain nutritious diet, with three or four glasses of wine a-day, or a proportionate quantity of brandy and water.

As before stated, the frequent exhibition of stimuli not having the desired effect of stopping the attacks, but rather being productive of injury by exciting the system and disordering the stomach, the treatment that Dr. Mitchell and myself found to be the best, during a fit, was simply to fan the face, apply Eau de Cologne, &c., to the nostrils, forehead,

and temples, and, if there were a disposition to a continuance, to give coffee or tea.

The most severe single attack this gentleman had, except the one which destroyed him, occurred at his dinner, about six months before his death. He had hastily eaten a mutton-chop, and was taking a second, when he was suddenly seized, and was, to all appearance, for a few seconds, dead.

His last attack, in April 1840, occurred also at his dinner, and was attended with no convulsive movement or other symptom, either in character or degree, that had not been noticed in the previous fits ;—it differed only in its termination.

The body was examined by Mr. Liston and Mr. Ancram thirty-six hours after death, in the presence of Dr. Mitchell and myself.

MR. LISTON'S REPORT.

Chest.—Lungs healthy. Heart large. The parietes of the left ventricle rather thin. The lining membrane was much thickened generally. The left auriculo-ventricular opening was rather enlarged, and admitted three fingers very easily. The valves of the aorta were healthy. The lining membrane of the right ventricle was slightly thickened in several places. The right auriculo-ventricular opening was extremely large, and admitted the points of four fingers and thumb. The valves of the pulmonary artery were quite healthy.

Head.—The dura mater was very firmly united

throughout its whole extent to the cranium, which was dense and unusually thin. There was a large quantity of serum contained in the cavity of the arachnoid. The substance of the brain was slightly congested. It was in other respects perfectly healthy. The medulla oblongata was small in size and extremely firm in consistence. The foramen magnum was altered in shape. The antero-posterior diameter much diminished. The superior part of the odontoid process of the axis appeared to have been pushed back, and somewhat raised above its usual situation. The antero-posterior diameter was so much narrowed that it would not admit of the little finger. The dura mater and ligament covering the posterior part of the body of the axis, were very much thickened. The atlas was in its usual situation, but the articular cavities were firmly ossified to the condyles of the occipital bone, and permitted no motion whatever between the atlas and skull. There was a slight unnatural projection on the lamina on the right side, between the spinous process and articular process of the axis.

No ossification or calcareous deposit was found in any part of the vascular system. The blood was in a fluid state.

The pneumogastric nerves were large, and the middle cervical ganglion of the right side was unusually developed.

In tracing the history of this case we cannot but be struck at the slow development of the symptoms,

as bearing connection with the state of the parts found on dissection; the first fit not occurring till two years after the accident, and death not produced till upwards of five years after the fall.

The injury to the occiput and to the first and second vertebræ at the time of the fall, must have been very great, though insufficient then to cause any visible effect on the functions of the spinal chord.

Inflammation, however, followed, and a consequent thickening of the ligaments, which narrowed the foramen magnum and upper part of the spinal canal, and thus affected the medulla oblongata and upper part of the spinal chord, diminishing the size and increasing the density of these parts.

This gentleman was enabled to ride on horseback until the fits came on, though with caution, and at a slow pace.

He never had paralysis, nor alkalescent urine, but was during the last three or four years of his life liable to cold feet and general chilliness. He never, after the first few weeks from the accident, suffered pain in the neck, and his spirits, when he was free from attacks, were excellent, and his general health often very good.