

## A CASE OF FATAL ANÆMIA.

By GEORGE PEACOCKE, M.D., F.R.C.P.I.;

Physician, Adelaide Hospital, Dublin.

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J. S., age forty-three years, a farmer, came under my care in August, 1913, suffering from anæmia, with severe digestive symptoms.

He had been a healthy man all his life, until the previous February, when he noticed that he got easily tired, had not the same strength as formerly, was losing colour, and suffered from pain after taking food, followed by vomiting.

Under the care of his doctor in the country he improved very much, and after a short holiday away from home returned sufficiently well to be able to resume his occupation. He was not, however, as strong as he had been previous to the commencement of his illness, and before long his old symptoms returned, and gradually getting worse he came up to town for further advice.

When I saw him he was very pale, thin, but not emaciated. The skin of his abdomen, chest and back, especially the lower part of his abdomen, was dark in colour—rather more black than brown. His face had a faintly yellowish tinge, but neither it nor the hands showed any pigmentation.

His symptoms were great muscular weakness, vomiting, constipation, and pain referred to the lower costal margin on the left side. Examination of the thorax showed the lungs healthy, heart sounds feeble, but no evidence of organic disease. There was a soft systolic murmur audible over the base of the heart, evidently hæmic. His pulse was small and feeble, low tension, and varied in rate from 80 to 100 per minute.

Throughout his illness his temperature was at times slightly elevated, but on no occasion did it exceed 100°F.

His abdomen was rather flat but extremely rigid, and owing to this latter sign I was unable ever to make a satis-

factory examination of the abdominal organs. There was no tenderness to pressure, and no visible signs of tumour.

I withdrew the contents of his stomach an hour after a test meal and found complete absence of HCl. For some weeks vomiting persisted—little food was able to be retained and drugs seemed to have no effect in checking it, but for no apparent reason it gradually became less, and he was able to take some solid food.

Constipation was most pronounced. No purgative medicines, except large doses of castor oil, had any effect, and enemata were often failures.

On a few occasions short and rather severe attacks of diarrhœa would occur, only to be followed by a return of constipation. His urine was normal in colour, alkaline on most occasions to litmus paper, contained a faint trace of albumen, but no tube casts.

A blood examination, made by Dr. Adrian Stokes, gave the following results:—

Erythrocytes—2,400,000 per cb. mm.

Leucocytes—3000.

Hæmoglobin—28 per cent.

Colour Index—.56.

Poikilocytes were present.

No polychromatophilia or nucleated red cells.

Though he stated he had suffered for some time past from hæmorrhoids there was never any trace of blood in the motions. There was also no blood detected in the vomited material.

There is nothing further to relate about the case. He gradually became weaker, more anæmic, lost flesh, mentally showed signs of decay, and finally died on December 2, ten months after the first symptoms of ill-health were noticed.

A *post-mortem* examination was made and nothing was found to account for his illness. The thorax and abdominal organs were all carefully examined, and, though pale, appeared healthy. The adrenals were examined microscopically, and were pronounced normal. The bone marrow was, unfortunately, not removed for examination.

The clinical picture presented by this case suggested at first a diagnosis of pernicious anæmia. The previous

attack, apparently similar to the present one, from which recovery was almost complete; the severe anæmia with gastro-intestinal symptoms; the slight irregular pyrexia and the pigmentation of the skin were all favourable to it. Relying, however, on the subsequent blood examination, which showed "a secondary anæmia," I looked for some other cause of the symptoms. Cancer of the stomach had much in its favour, and I came to regard the case as one of malignant disease most probably affecting the stomach.

The symptoms suggesting this diagnosis were: severe and very persistent vomiting, with complete absence of HCl. from the stomach contents; the progressive emaciation, and the severe anæmia of a secondary type.

The absence of a palpable tumour was not against this diagnosis, as the abdominal wall remained so rigid throughout the entire illness that examination of the abdominal contents was an impossibility.

The only other possible diagnosis was Addison's disease. In favour of it were the gastric symptoms, the extreme muscular weakness, the feebleness of the heart's action, and the pigmented condition of the skin. This pigment was, however, as already mentioned, not on the exposed parts of the body, and was not the colour usually found in this disease. The degree of anæmia was also much more severe than is usually found in Addison's disease.

The *post-mortem* findings put the two latter out of court. In our text-books a very definite blood picture is given of the changes occurring in pernicious anæmia. Too much stress is, I am sure, laid on a high colour index, though it is generally held that in severe cases it is usually present. The high colour index depends upon the presence of megalocytes in considerable numbers, but in

many of the milder forms, and especially in the earlier stages of the disease, mikrocytes often preponderate. The changes in the erythrocytes themselves are of more importance. Normoblasts and megaloblasts, as well as polychromatophilic cells, are regarded as essential for the diagnosis of pernicious anæmia. In this case they were conspicuous by their absence, and so, without committing myself further, I have entitled my paper a case of fatal anæmia. That death was due in this instance to a "primary" anæmia I have no doubt. Are we justified in calling it pernicious anæmia? If not, there must be another variety which runs its course to a fatal termination, clinically indistinguishable from the pernicious type, except for the appearances presented by the blood, and for which the ætiology is as yet obscure.