Preliminary note on some aspects of splenic anaemia / by G. A. Gibson.

Reprinted from THE LANCET, *March 21, 1908.*

PRELIMINARY NOTE ON SOME ASPECTS OF SPLENIC ANÆMIA.

BY G. A. GIBSON, M.D., SC.D. EDIN., LL.D. ST. AND.,

PHYSICIAN TO THE ROYAL INFIRMARY, EDINBURGH.

SOME interesting points in regard to the possibilities of relief in cases of splenic anæmia have arisen in connexion with a case recently under my care and it seems advisable to bring them forward. For the notes of the case my warm thanks are due to my house physician, Dr. A. I. Shepheard-Walwyn, who will shortly publish an exhaustive account; it will be found to amplify our knowledge of the disease and to add some new features to the excellent summaries which we owe to the researches of Senator [1] and Osler.[2]

A railway guard, aged 36 years, born in Strathspey and engaged on the Highland Railway, was admitted to the Royal Infirmary, Edinburgh, on Sept. 26th, 1907, complaining of a growth in the abdomen. The patient had a good family history and his personal antecedents were satisfactory as regards habits and health. On Feb. 4th, 1907, he was severely shaken and his face cut in a railway accident, from which he dated his illness. About the end of February he began to vomit his food about an hour after every meal. He had no pain. The vomited matter was greenish and never contained blood. This continued until the beginning of June when his gastric symptoms improved, and he only vomited occasionally since.

[1] Berliner Klinische Wochenschrift, 1901, S. 1145.

[2] American Journal of the Medical Sciences, 1900, p. 54, and Transactions of the Association of American Physicians, 1902, p. 429.

About the same time he noticed unusual pulsation in his throat but it gave him no trouble. In the middle of June he felt himself losing strength and noticed that his feet swelled when he was up. He took to his bed at this time and had been there ever since, gradually losing strength. His medical attendant afterwards noticed a swelling in his abdomen and sent him to Ward 29. On examination there was great enlargement of the spleen, which reached forwards to within three-quarters of an inch of the middle line and downwards to half an inch below the umbilicus ; it measured seven inches in breadth. There was no change in any other gland. The blood showed 50 per cent. hæmoglobin, 2,250,000 erythrocytes, and 3600 leucocytes. The film gave the following differential count : polymorphonuclears, 73 per cent.; small lymphocytes, 23 per cent. ; large mononuclears, 3 per cent. ; and eosinophiles, 1 per cent. The staining of the erythrocytes was feeble and irregular, but there was no pronounced poikilocytosis. The patient complained of breathlessness on slight exertion, and also of a throbbing sensation in his chest, neck, and head. Diffuse pulsation was seen all over the chest, neck, and abdomen. The apex beat was forcible and diffuse but no thrills could be felt. The heart was slightly enlarged. There was a loud systolic murmur over the manubrium, propagated into the cervical and subclavian arteries. The second sound was replaced by a murmur softer in character, propagated down the sternum, and faintly heard in the tricuspid area. In the mitral area the first sound was followed by a soft systolic murmur, propagated into the axilla; the second sound was reduplicated. The vessels were slightly thickened. The systolic pressure was 108 millimetres Hg, and the diastolic 80. The rate was 86 and the character of the pulse was that of Corrigan. There was no evidence of renal implication.

As regards the progress of the case, the temperature fluctuated considerably but regularly. The differential

count changed, so that the lymphocytes usually formed about 35 per cent. The patient was treated with liquor arsenicalis in five minim doses, which were increased by Oct. 13th to 20 minims but had to be reduced. The leucocytes fell somewhat and remained fairly steady at about 2500 till Oct. 20th, when nucleinic acid was tried hypodermically in large doses, and the leucocytes rose to 4500. They once reached 5000. They did not remain at this height, however, in spite of large quantities of nucleinic acid, and fell away again to about 3800. The patient steadily put on weight during his first month in hospital, but he then gradually lost it again. He was at intervals much troubled with abdominal pain, diarrhœa, and vomiting, which seemed to have been due to the large doses of arsenic. During November he became steadily worse and suffered from some severe attacks of epistaxis. In these circumstances the question of splenectomy, advocated by Harris and Herzog [3] and endorsed by Stengel,[4] naturally came up for discussion, but it occurred to me that before considering the advisability of recommending such a serious step it would be well to ascertain the state of the bone marrow in order to determine whether any useful end might be attained by surgical intervention. The whole state of matters was therefore explained to the patient who gladly hailed the suggestion of a small operation so evidently fraught with promise of utility. Mr. F. M. Caird accordingly was so kind as to trephine the left tibia on Dec. 1st and a small portion of bone marrow was removed for investigation. Careful examination by my own staff and by Dr. W. E. Carnegie Dickson, of the pathological department, showed that a high degree of gelatinous degeneration was present without any appearance of regeneration. It was therefore

[3] Annals of Surgery, 1901, p. 111.

[4] Nothnagel's Practice: Diseases of the Kidneys and of the Spleen, edited by A. Stengel, 1905, p. 602.

clear that no hope lay in splenectomy and the patient was not subjected to operative procedure. During December there was recurring hæmorrhage from most of the mucous membranes as well as from the kidneys. Anasarca and hydrothorax developed, but the end came on Jan. 14th, 1908, with a sudden attack of hyperpyrexia. The subsequent examination showed the characteristic appearances of splenic anæmia and the state of the bone marrow fully confirmed the conclusions to which we were led during life.

Edinburgh.