The ilia were considerably enlarged. The right shoulder girdle was only very slightly affected. The right humerus was markedly affected in the head and lower part of the shaft. The upper third of the right ulna and whole of the right radius were involved, the arm showing considerable bowing. The small bones of the right wrist and hand were not affected in any way. The left shoulder girdle, clavicle, and coracoid were slightly involved; the head of the left humerus and the shaft scarcely at all. The olecranon process and head of the left ulna were involved, but the rest of the bone and the radius had almost entirely escaped. The small bones of the wrist and hand were normal. The head of the right femur was involved to a certain extent, as was the shaft, and the ischium was slightly affected. The lower end of the right femur was markedly affected, as were the tibia and fibula, the leg showing decided bowing. The left pubis ischium and femur were very markedly affected, and there was a decided superimposed arthritis in the left hip-joint. The tibia was very markedly affected and the fibula to a less degree, the knee-joint showing a mild arthritis. Small bones of the ankle and foot were not affected, nor were the lower portions of the tibia. The articular surfaces were, on the whole, free, except for the left hip and left knee. These were painful on extreme movement in any direction, but more particularly in abduction and external rotation of the hip.

Examination of the heart and lungs was negative. No abnormalities were found in the abdomen, with the exception of slight piles both external and internal. This did not trouble him to any great extent except for slight bleeding about once in six weeks. The teeth, though many had had fillings, were healthy and the gums showed no pyorrhoea. Mr. Mumford kindly examined the nose and throat, and reported as follows: A chronic post-nasal catarrh with chronic pharyngitis. Pus was exuding from the antrum in considerable quantities. He did not advise operation, as in the porous condition of the skull bones infection might be spread farther. The tonsils were comparatively healthy. Blood examination showed no abnormalities, and the urine examination was negative. The Wassermann reaction in the blood was negative. The diet had been so varied, owing to his residence in India, Canada, and England, that no conclusions could be drawn.

Treatment.—He was given ionization to the left hip, as this had given him relief before, and he was instructed in the use of nasal antiseptics. After four weeks the pain in the hip was somewhat relieved, but otherwise he remained *in statu quo*.

This case seems to correspond exactly to the original clinical picture described by Paget. There is no obvious cause for the onset of the inflammation, it being noticeable that there is no history of trauma. Certain observers have lately suggested that Paget's disease occurs after blows on the various parts of the skeleton. It would seem, however, that the conditions are definitely distinguishable, and Paget's disease cannot be classed with the cases of traumatic osteitis. The course of the disease is slow and does not affect the general health to any extent. In the present case there was little or no pain except in the left hip and knee, which would seem to be due more to superimposed arthritis than to the actual inflammation of the bones. Pain is not always absent in Paget's disease, as in some cases tender points have been described frequently on the tibia and sometimes in the skull. The progressive enlargement of the vault of the skull is exceedingly characteristic, and the x rays at once puts the diagnosis beyond doubt. So far no treatment has been discovered which holds out any prospect of relief. In the cases of traumatic osteitis referred to above Lane seems to have had some success by scraping out cancellated parts of the bone, but in such a widespread condition as the present this treatment is obviously inapplicable.

"PERNICIOUS ANAEMIA," APLASTIC OR TOXIC.

BY

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BOGNOR.

An interesting case of "pernicious anaemia" recently came under my care. The patient was an Englishman, aged 48, who had a splendid health record; he weathered the strenuous South African campaign, suffering great privation and exposure, and remained physically fit and worked hard afterwards, but eventually in 1917 his "nerves gave way" owing to privations, business worries, and bad food. His weight decreased; haemorrhoids, from which he had suffered for twenty years, caused trouble, and were removed by operation in March, 1918. Nine months later bleeding and discharge began to occur at intervals every few weeks. In 1919 his appetite became poor, and he felt languid, depressed, and fatigued; flatulence was marked, and his colour became pale. In November, 1920, he had "influenzal catarrh" with diarrhoea lasting fourteen days; an anal abscess developed and burst, leaving an anal fistula. This was successfully cured, under cocaine anaesthesia, during his present treatment.

The blood picture of the aplastic type of pernicious anaemia, as given by H. Vasquez and Ch. Aubertin in *Le Traitement des Anémies*, is as follows:

No poikilocytosis, no anisocytosis, no polychromatophilia, decreased number of leucocytes, relative decrease of polymorphonuclears; no myelocytes; no eosinophils; no nucleated reds, no haematoblasts. Coagulation absent or greatly decreased.

Now the first blood picture of the case here related conformed to this type in all particulars except the anisocytosis: only a few large red cells were found. The relative number of mononuclears throughout the course of the disease was excessive and this pointed to the existence of a bacillary infection which was not overcome. I was led, therefore, to believe that I was dealing with a case of toxic anaemia.

	Jan. 27, 1921.	Feb. 23, 1921.	April 21, 1921.	July 4, 1921.
Red cells	2,800,000	2,500,000	5,800,000	6,800,000
Haemoglobin (Haldane's)	45%	65%	93%	105%
Colour index	0.9	0.77	0.8	0.8
Leucocytes	6,542	7,500	8,125	8,417
Polymorphs	62.4%	24.5%	50.6%	49%
Mononuclears	33.2%	64.7%	43.4%	46%
.. large	5.6%	43.2%	35%	2%
.. small	27.9%	21.5%	8.4%	19%
Hyaline cells	3.2%	7.7%	5%	4%
Eosinophils	Nil	3.1%	1%	1%
Mast cells	0.9%	Nil	Nil	Nil
Eichhorst's corpuscles ...	Nil	Nil	1 per 1,000 reds	2% reds
Abnormal cells	A few large red cells	None	None	None
Arneth's index (normal 2.76)	2.91	4.05	2.23	2.55

The diarrhoea was first checked by astringents and tincture of opium. Gastritis was troublesome until the discovery that there was a lack of free hydrochloric acid in the gastric contents. The administration of hydrochloric acid in large quantities overcame this and stopped the excessive flatulence which he had after meals. Carbohydrates were restricted; later he gradually took to normal diet. Injections of soamin were given until the maximum amount was injected. Capsules of beta naphthol (1½ grams) were given daily and also haemoglobin.

When I saw the patient on July 4th, 1921, he appeared in excellent health, eating well of everything, sleeping well, enjoying all sports, and complaining of no fatigue. In this condition he returned to South Africa to resume his former work. On October 1st, 1921, all medicine was discontinued. In a note dated February 15th, 1922, he states that he is "absolutely fit in every way."

THE LOCAL APPLICATION OF TUBERCULIN.

BY

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MODERN writers on tuberculosis tend to decry the value of tuberculin. Fowler, in his recent volume on tuberculosis, says that "nothing at all is heard now of tuberculin as a remedy." It does not, however, follow from this that it is not being used to good purpose. While not a specific for tuberculosis of the lungs, it is, if given in small doses at weekly intervals, undoubtedly an influential factor for good. Cases treated with tuberculin make more satisfactory and more rapid progress than others not receiving such injections. In addition to using tuberculin hypodermically in pulmonary tuberculosis, we have for several years been using it locally—in gland cases, in lupus, and in abdominal tuberculosis particularly—with excellent results.

The tuberculin is made up in an ointment, using anhydrous lanoline as a basis when lupus or adenitis is treated. It is made up in the form of a liniment when dealing with abdominal disease or pulmonary tuberculosis. The strength of the preparation varies according to the reactive power of the patient, the aim being to secure a definite reaction at the site