

the marrow were found in one case to present only the aspect of microcytes, which is usually regarded as a late stage of the red corpuscle. It appears also that, according to the recent observations of Grohé, similar cells are to be found in the bone marrow in other diseases besides pernicious anæmia.—*Lancet*, Dec. 17, 1881.

#### *Miner's Anæmia.*

In a communication to the Académie des Sciences, M. Perroncito has described an anæmia which occurs among the miners of St. Etienne, and which resembles closely the disease observed among the workmen at the St. Gothard tunnel, and found to depend on the anchylostoma duodenale. Examination of the stools of three patients at St. Etienne revealed in each large numbers of the ova of anchylostoma. This observation proves the identity of the two diseases. The same parasitic affection has been met with among the miners of Schennitz. "Miners' anæmia" is thus brought into the class of preventable maladies, since it may be prevented or cured by the employment of substances which have been found capable of destroying the ova either outside or within the human body. The larvæ do not develop in the intestine, but in the fecal substances after defecation, and penetrate the organisms by the air or water after their development. In no stage can an organism resist a temperature of 50° Centigrade, and the larvæ are quickly killed by concentrated solution of chloride of sodium, in sulphuric or hydrochloric acid, in ethylic alcohol, or in one to five per cent. solutions of carbolic acid, and in one-half per cent. solution of thymic acid, and in ethereal extract of male fern. By any of these means the fecal larvæ can readily be destroyed. The male fern given internally is always effectual, even in a single dose. Thymic acid may also be given by the mouth for the same purpose.—*Lancet*, Jan. 21, 1882.

#### *Cells Containing Red Blood-Corpuscles.*

Dr. OSLER, of Montreal, refers to the observations of Riess as to the presence of these elements in the bone marrow in pernicious anæmia. Dr. Osler has noted their occurrence in the lymphoid marrow in this affection; in three cases very abundant, in two in moderate numbers. An examination of the marrow in over seventy-five persons of all ages and dead of various diseases has led him to conclude—1st, that cells containing red blood-corpuscles are normal elements in red marrow; and 2d, that it is impossible to connect their presence with any particular disease. He has found them very numerous in cases of phthisis (2), pneumonia (1), typhoid fever (2), ulcerative endocarditis (1). They were present in the marrow of a fœtus at the sixth month, and in that of the sternum of an old man of seventy-six. He does not remember ever having any difficulty in demonstrating them to students in the ordinary red marrow of the rib. Litten and Orth<sup>1</sup> speak of these cells as occurring in a considerable proportion of the cases which they examined, and they also could not connect their occurrence with any special set of conditions. As in the spleen, they present remarkable variations in number, in some instances being scanty and difficult to find, in others so abundant that each field of the microscope contains several examples. On the structural peculiarities and development of these cells he does not here dwell further than to say that each one may contain from one to ten or twelve red corpuscles, which may have a perfectly natural appearance, or be in every stage of transformation into brown pigment grains. He has notes of the occurrence of these cells in the following localities:—

<sup>1</sup> Berliner Klin. Wochenschrift, 1877.

1. In the connective tissue cell of the embryo and new-born animal. Here, in all probability, the red corpuscles are in process of development (Schäfer).

2. In red marrow, of which they form a normal constituent, but, like the myeloplques, occur in very variable numbers.

3. In the spleen pulp, normal element (Kölliker), they are particularly abundant when the organ is rich in pulp, as in the acute swelling of fever.

4. In lymphatic glands, when in a state of congestion and tumefaction; not a constant feature, but sometimes very numerous.

5. In brown induration of the lungs; part, at any rate, of the pigment in this condition results from the ingestion of red corpuscles (which leave the engorged vessels by diapedesis or extravasation) by the cells of the alveolar stroma, in which they gradually undergo transformation into brownish-red grains.

6. In the neighbourhood of extravasated blood the connective tissue cells, fixed and amœboid, are often found to contain red blood-corpuscles, which can be traced in all stages of degeneration into pigment granules.

Artificially, he has seen these cells produced by feeding lively white blood-corpuscles of the newt or frog with human red blood-corpuscles; he has a sketch of a colourless blood-cell of the newt distended with four red corpuscles which it had eaten.—*Lancet*, Feb. 4, 1882.

#### *Prophylactic Inoculation of Rabies.*

The medical profession may reasonably watch with the most profound interest the attempts now being made to ascertain whether the remarkable discoveries of Pasteur and others, regarding the prevention of acute specific diseases by vaccination with the modified virus, are in any way applicable to rabies. In spite of the attention which has been devoted to it, the subject of the treatment of this terrible disease remains the darkest chapter in the records of therapeutics, and in no other direction than prophylaxis is there at present to be discerned a glimmer of light. M. Galtier has lately stated that the injection of saliva from a rabid dog into the veins of sheep not only does not communicate the disease in its ordinary form, but appears even to confer immunity, so that the disease cannot be afterwards communicated to the sheep in any other way. The same result was obtained in the case of eight sheep thus treated. The experiments are not yet sufficient to justify any definite conclusion even as regards sheep, and no results have as yet been obtained as regards dogs.

In this connection, however, some experiments by Lussana are of interest. They were made a year ago, and have attracted little notice, but their possible significance has recently been pointed out by M. Gibier. Blood from a patient suffering from hydrophobia was injected into the veins of dogs. The patient was a medical man, practising in the suburbs of Padua, who had been bitten three months previously by a rabid dog. Observing in himself what he believed to be symptoms of the disease, he came one day to the hospital and asked to be admitted, as he wished to spare his family the terrible spectacle of his sufferings. He died a few days later, with characteristic symptoms. Before his death five grammes of blood were obtained by means of leeches, and diluted with twenty grammes of distilled water; another five grammes were obtained from the leech later by means of cupping-glasses, and similarly diluted. These were filtered, and in the filtrate no solid element, corpuscle, or bacteria could be discovered by the microscope. On January 9th the two solutions were injected into the femoral veins of two dogs. They presented no symptoms until February 1st, when they appeared dull and quiet. On February 3d one of them remained in his bed, and the following morning, twenty-four days after the injection, was found dead. A