

the walls gradually thickening, and the calibre of the canal diminishing so slowly that the left kidney was able to accommodate itself to the increased work of renal elimination, until at the time of complete closure of the canal the organ of the opposite side had become considerably hypertrophied and capable of performing its own work and that of its fellow, while its useless associate gradually underwent the degeneration above mentioned.

Is it possible that what the patient called bilious attacks were in reality passages of renal calculi? The history hardly warrants this conclusion, yet, in view of the tendency of the laity to attribute all sorts of symptoms to biliousness, is it not possible that these attacks, the history of which at best is obscure and unsatisfactory, were due to this cause, and that the missing link in the sequence of cause and effect in the case under consideration may be thus supplied?

A CASE OF LEUKÆMIA.¹

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THE patient was a woman of fifty-seven. The history in brief is that during the past year she has gradually lost flesh and strength, and frequently has suffered from feelings of uneasiness in the epigastrium and left hypochondrium, accompanied by loss of appetite and annoying constipation. For the past two months these symptoms have been continuous, gradually increasing in severity, until towards the close of life pain in the regions mentioned became excessive, and was accompanied by great tenderness. An ill-defined tumor was to be felt projecting slightly from beneath the false ribs on the left side. A nodule was also to be felt in the epigastrium. On account of the thickness of the abdominal walls and the great tenderness, the relations of these tumors to each other could not be well made out. An examination of the urine showed a very large sediment of uric acid crystals; otherwise nothing abnormal. About a fortnight before death the skin, which had before been pale, assumed a decided lemon-yellow tinge. Her throat at this time was painful, the fauces were red and dry, and covered with tenacious mucus. The glands on both sides of the neck were swollen. Four or five days before death a number of hæmorrhagic spots appeared on the breast and abdomen.

Autopsy twenty-four hours after death. The lungs were healthy. The heart was abnormal only in being pale and flaccid. The clots in the heart, as in other organs, were found to be yellowish-white throughout, with no red portion.

The spleen measured seven and one half inches in length, four and one

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half inches in breadth, and two and three fourths inches in thickness. It was attached to the parts in its vicinity by recent fibrinous adhesions. The larger part of the spleen was in a condition of cellular hyperplasia, the pulp concealing the follicles and septa. Other considerable portions had undergone an inflammatory process, which had left them somewhat indurated. The perisplenitis was for the most part confined to the surface of the latter portion of the organ. Besides these more extensive changes, there were at and near the surface of the spleen several firm masses of a whitish-yellow color, wedge shaped, with their apices directed toward the hilus. Although no embolism of the vessels supplying these parts could be made out, still they were probably old hæmorrhagic infarctions. Scrapings from the cut surface of the spleen put under the microscope showed a few cells containing one, two, and three red blood cells and many red blood corpuscles, which, in addition to their own proper outline, were surrounded by another membrane, in some portion of which a nucleus could generally be discovered.

The kidneys were anæmic. Upon one of them, between the capsule and parenchyma of the organ, was a grayish tumor of about the size of a bean. From the surface of the kidney in contact with this a gray wedge of tissue extended down into the cortical substance of the organ. The tumor consisted of lymphoid cells, and the grayish tissue beneath, and while retaining the connective tissue net-work of the organ, contained no trace of the epithelium of the tubes, its place being occupied by lymphoid cells. In other parts of the organ these cells were found among the proper elements of the kidney, which they had not yet succeeded in destroying. In one suprarenal capsule, between the inner layers of the medullary substance, was a cavity containing about a drachm of a reddish-brown fluid, and on its wall was the fibrinous portion of a tolerably recent clot. The other was normal, with the exception of a few grayish points of lymphoid tissue in the medullary portion.

The liver was pale, and thickly studded with fine grayish points. The blood in the vessels was extremely rich in white cells, rather smaller than ordinary white blood corpuscles. Microscopic sections of the hardened liver showed the acini separated from each other by a broad net-work of round cells. The spaces between the individual cells of the acini were occupied by narrow lines of similar cells, which in many instances could be distinctly seen to be in the capillary vessels. The digestive track offered no noticeable changes. The retro-peritoneal glands were much enlarged, especially behind the pylorus, where there was a mass of the size of a small fist.