

CASE 5 (Path. No. 20, 1899).—Female, æt. 69. Pneumonia; *intestinal hæmorrhage on day of death.*

MICROSCOPICAL EXAMINATION.—*Liver.*—Fatty degeneration of the liver cells, which are often swollen. There is finely granular iron pigment in the liver cells, arranged along the walls of the bile capillaries, also diffuse staining of the capillary endothelium as in the last case. Many leucocytes in the capillaries contain iron granules.

Spleen.—The parenchyma takes a diffuse blue tinge with Perl, and coarsely granular iron-containing pigment is scattered through it.

Pancreas.—No pigmentation.

There was in all these cases a history of localised blood disintegration, either hæmorrhage or chronic suppuration, and in all cases a history of some intestinal disturbance.

Blood disintegration, either from localised extravasations into the body tissues, or from breaking down of red corpuscles within the blood stream—as in pernicious anæmia and extreme cachexia—seems to be very frequent in cases of hæmochromatosis. In Hintze's three cases there was a history of subcutaneous hæmorrhage, hæmorrhagic pericarditis, and hæmorrhagic peritonitis. Hindenlang⁽¹⁴⁾ (1880) gives a case of advanced hæmochromatosis with cirrhosis occurring in a course of purpura. In our own case, though there was no obvious anæmia (no blood count was made), it is interesting to recall the tendency towards hæmorrhage evinced by the frequent epistaxis. On the other hand, such a history is not constant, and blood disintegration may exist both as an extravasation and in advanced cachexias without hæmosiderosis of the liver cells. Zaleski gives a case of purpura in which there was no hæmosiderosis. I have myself examined several cases in which hæmorrhages had taken place into the tissues, among others a case of purpura, with a negative result.

Auscher and Lapique⁽¹⁵⁾ injected blood into the peritoneal cavity of animals, and obtained iron pigmentation of the spleen, but not of the liver cells.

Hæmorrhage alone is thus clearly not the cause of hæmochromatosis, there must be something behind or accompanying it—a something which becomes active, either under repeated interstitial hæmorrhages or destructive changes occurring in the circulating blood. And, further, it may be that some disturbance of the specific cells of the liver and other organs is also required to favour the deposit within them of the iron-containing pigment. It is possible, indeed we know, that under ordinary conditions the blood pigment is eliminated in a soluble form, leaving no trace of its presence within the cells.

The remarkable frequency with which hæmosiderosis occurs in cases of cirrhosis, and when affecting the pancreas its frequent association with advanced disease of this organ, shows that this possibility must be kept in mind. Thus Kretz found hæmosiderosis in fourteen of the twenty-six, and we ourselves in six out of sixteen, cirrhotic livers. On the other hand, the tissue changes in cirrhosis, and the interstitial pan-