

In the microscopical study of sections of the liver and pancreas from the material before me—our own and the two cases recorded by Kretz—we have noted repeatedly the heavily pigmented hepatic cells, breaking down to form masses of coarse granular pigment in the fibrous tissue, which at such points is very cellular, evidently of new formation. This appearance would indicate that the formation of pigment is, in part at least, antecedent to the cirrhotic change. Other observers, Opie, Anschutz, Hintze, and Kretz, and indeed all whose work I have followed carefully, have noticed this appearance and drawn this conclusion.

If, then, the pigmentation be primary, it seems rational in studying the etiology of this condition to follow along German lines, and seek to ascertain the pathological conditions under which pigment, giving the iron reaction, is deposited in the parenchymatous cells.

Following the example of Peters, Hunter, and Kretz, I have examined microchemically the organs from a large number of cases. The following results are interesting:—

Among sixteen cases of cirrhosis, there was hæmosiderosis six times. Here the liver only was examined, as the material was obtained from a number of cirrhotic livers collected for another purpose. In three of these cases pigmentation was marked, the iron being present, not only as fine granules in the liver cells, but lying also in coarser masses in the connective tissue, as in our case of general hæmochromatosis. In the remaining three cases it was confined to the liver cells, lying as fine granules along the margin of the bile capillaries.

Among eight cases of typhoid examined there was hæmosiderosis twice; in one it was very slight, simply giving a greenish tinge to the section; in the second, in which there was a clinical history of intestinal hæmorrhage, it was marked, occurring as fine granules in the liver cells. The connective tissue was free.

Forty-one cases were chosen from the post-mortem material at the Royal Victoria Hospital of the past eighteen months, because there was a note in the report that golden-brown pigmentation of the liver cells existed. The liver, spleen, pancreas, and sometimes the heart muscle were examined. Cases of pernicious anæmia, where hæmosiderosis of the liver cells is an almost constant condition, were excluded. In these forty-one cases there was hæmosiderosis four times; both liver and spleen gave a marked reaction, but the *pancreas was free from pigment in all cases*. In the liver the pigment lay in finely granular form in the cells, sometimes in the capillaries and the capillary endothelium, never in the connective tissue. In the spleen there was a diffuse staining and also a *coarsely granular* pigmentation of the parenchyma. The trabeculae were generally free. In a fifth case there was iron pigment in the capillary walls and contents, none in the liver cells or spleen. The following is a short account of these cases:—