

I was sent for one afternoon to see him, but found him so well and jolly that I concluded there was not much the matter with him. That evening, at 8 o'clock, he complained of feeling a little sick and of pain in the head; no paralytic symptoms at any time. An hour and a half later he was dead. I had never known death to occur from cerebral hæmorrhage in less than 8 hours.

Dr. Cameron said that the condition of the stools could never be ascertained. The patient was not a drinker. There had not been a hæmatemesis of late. The hæmatemesis must have been due to obstruction of the vessels of the stomach by the growth.

Dr. Peters, who performed the autopsy, said that there was found an extensive hæmorrhage into the meninges of four or five ounces of blood. This came from a rupture in the basilar artery. The arteries at the base of the brain were markedly atheromatous. There was no interstitial hæmorrhage.

There was a hard, nodular tumor, involving the whole head of the pancreas, surrounding the pylorus, but not involving it, for it was still patent. The stomach was but little dilated. The growth had surrounded and caused the disappearance of the gall bladder and cystic duct. The common duct was found. The liver was slightly shrunken. There were adhesions to the transverse colon, hepatic flexure, and omentum. There was a cystic condition of the left suprarenal capsule, while the right was unaffected.

#### CHYLOUS URINE.

Dr. Graham exhibited a specimen of chylous urine, obtained from a patient of Dr. Todd's, who had typhoid fever complicated by pneumonia.

A. B. Macallum :

#### NORMAL PROCESSES OF DEGENERATION IN THE UTERINE MUCOSA OF THE PLACENTAL SITE IN THE CAT.

The greatly enlarged endothelial elements and the glandular cells of the placental mucosa in the cat, present many points of interest in connection with the studies on the degeneration of cells in epithelial neoplasms. That they are of great physiological importance to the embryo, my studies, I think, have shown unmistakably.

The ordinary endothelial cells of the mater

nal bloodvessels, increase in size simultaneously with the widening of the latter till each capillary appears like a gland tubule lined by large irregular cells, with a tortuous lumen in the centre. The edge of the cells next the lumen have a granular border, and they are separated from the syncytium of the foetal ectoderm by thin strands of fibrillar tissue. The latter is seen with difficulty in some places, where the endothelial cells appear to abut directly on the syncytium. This is especially the case in the stage where the embryo measures less than an inch in length. At this stage, also, the endothelial cells frequently exhibit indirect division, the amount of chromatin present in such cases being remarkably small in comparison with the amount of the cytoplasm. The latter condition recalls a common peculiarity in epithelial neoplasms. At this stage in the placental history, the division of the nucleus, apparently, usually is followed by division of the cell, but in the placenta at later stages (when *e. g.* the embryo is nearly 3 inches in length) the division of the nucleus is rarely followed by division of the cell, so that in the latter we frequently see two or more nuclei, each larger than the single nucleus of the earlier stages. This condition is accompanied by certain changes in the cell body, which becomes vacuolated, especially towards the periphery, and the cytoplasm becomes fibrillar, the fibrillæ radiating towards the cell boundaries. These cells are separated from the lumen of the bloodvessel by a new endothelial lining composed of small endothelial cells and a hyaline membrane, the cells and the membrane appearing perforated by canals like those in the peripheral border of the epithelial cells of the intestine. The older endothelial cells exhibit plasmolysis either in one of their nuclei or in the whole cell. The nuclear contents in some cases appear to undergo chromatolysis. When a whole cell degenerates, the mass acquires an eosinophilous character, fragments, the pieces are taken up by the protoplasm of the syncytium of the foetal villi, passed through the cellular layer and thrown into the lymphatic spaces of the villi. On their passage the fragments become more numerous and smaller, till finally they are of granular size. In earlier stages (when the embryo measured less than one inch in length), similar yolk-like masses are seen