

contained granules of hæmatoidine; its corpuscles were larger than usual; colorless corpuscles with one, two, and three nuclei, were abundant; the greater part of the field was covered with crystals of margarine, stearine, and free oil globules. On adding ether to a portion of the blood, the oil was entirely dissolved.

From a cursory examination, one would be inclined to consider this as a case of ordinary gangrene attacking the stump; but, after a more thorough investigation its pathology is found not to be so readily arrived at, and it proves to be a case of more than ordinary interest, and worthy of further consideration. The most striking features of the case are, mortification, and the occurrence of gas and oil in the blood-vessels. Mortification of itself is not uncommon after severe injuries and operations—especially now-a-days. Neither is the collection of gas in the blood-vessels or connective tissue rare in such cases, but I believe the presence of so large a quantity of oil in the blood, constituting a true pathological piarhæmia, is very rare under any circumstances, and the occurrence of these three conditions together is still more remarkable.

I conceive of two ways of solving the pathology of this case. First by considering mortification, caused by a loss of vitality in the tissues of the injured limb, from the shock of the injury, from inflammation or otherwise, as the first of the train of accidents occurring after the infliction of the injury; this was soon followed by the generation of gas, from decomposition going on in the mortified parts; the gas being carried into the circulation through the medium of the veins, produced decomposition of the blood—piarhæmia and necræmia.

Or, secondly, to look upon the shock from the accident, from the operation, or both as producing primarily a disorganization of the blood. According to this theory we shall have the orders reversed; first necræmia, and as a consequence, the generation of gas in the blood-vessels from decomposition of the blood itself; then follow piarhæmia, and lastly gangrene. Comparing them in order, we have according to the first, mortification, generation of gas (from the tissues), piarhæmia, and necræmia. In the second, necræmia, generation of gas (from the blood), piarhæmia, and mortification.

In accordance with the microscopical examination of the blood, and from the fact of the gas being observed to occur first in the veins, and only secondarily and but slightly affecting the connective tissue, I conclude that the latter theory is correct, and explains the true pathology of this case; in fact, "death began with the blood," and the other conditions followed as necessary results. The cause of the disorganization of the blood, I think, must be attributed to the shock—either from the