

what both held to be useless and impossible, namely, the study of pathological physiology. In the minds of the reigning circles, Hartmann's *Theoria Morbi* rendered all that was necessary to the clinician and practitioner for the interpretation of symptoms and of the healing process. More than this was evil; unfruitful learning they called it. And when I published an article in my second volume upon the reform of pathological and therapeutic views through microscopic investigation, when I desired that the whole of medicine should move at least three hundred times closer to natural processes, then I appeared to these gentlemen as an out and out unpractical and possibly even dangerous doctrinaire and adventurer."

It was natural that the earliest researches of Virchow should have been directed towards the study of the cells of the body, since less than ten years earlier Schwann and Schleiden had announced the discovery, the one of the animal, the other of the vegetable cell. It was natural, also, that a mind so critical should at once attempt to test the pathology of the humoralists from this standpoint. We find, therefore, that his early contributions to science are largely upon the microscopic characters of blood, both normal and pathological. From these investigations resulted his papers on pigmentation, in which he demonstrates so clearly the two forms of blood pigment which are produced by hemorrhage into the tissues, a chapter upon minute pathological change so complete as practically to close the subject. At this time also appeared the results of his work on that peculiar disease of the blood, leucemia, a name which he himself suggested. The curious gross appearance of the blood in advanced cases of this disease led to a confusion with purulent conditions, and superficial examinations under the microscope seemed to confirm this view; to Virchow we owe the recognition of it as a disease *sui generis* associated with enlargement of the spleen and other symptoms, and entirely distinct from pyemia with which it had been confused.

From these studies he was naturally led to a study of inflammation of the vessels, the results of such inflammatory changes, the formation of thrombi or clots, and the conditions which governed the clotting of blood in the living body. Indeed, the clotting of the blood in the living body had, by a series of false hypotheses, been brought by Cruveilhier to explain the whole question of inflammation. This French pathologist had noted that the first evidence of the inflammation of the veins consisted in a clotting of the blood; and as in inflammations of the organs, the presence of clots could not be demonstrated in the larger vessels, he introduced the hypothetical condition of capillary phlebitis, that is to say, an inflammation and clotting of the blood in the capillaries. It was to be expected that such a hypothesis, unsupported by facts, would attract Virchow's attention, and in his study of thromboses