

# PROGRESS OF MEDICAL SCIENCE.

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## MEDICINE.

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UNDER THE CHARGE OF

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**Erythromelalgia in Disease of the Spinal Cord.**—Mitchell in his second paper (1878) put forward the opinion that this remarkable condition might in the future be found associated with distinct lesions in definite regions of the brain or cord. Cases have been reported in connection with locomotor ataxia and with acute disease of the spinal cord, but the most extensive collection of cases in connection with central disease has been reported by JAMES COLLIER in the *Lancet* for August 13, 1898. He has met with ten cases in the short period of six months' service at the National Hospital for the Paralyzed and Epileptic. This is a very remarkable experience when one considers that a recent writer on the disease, Rost, states that there are in the literature only some forty genuine cases. Six of Collier's cases presented the signs of disseminated sclerosis, two were cases of tabes, one a chronic myelitis, and one traumatic neurasthenia. The general symptoms as given in the cases certainly suggest the condition described by Mitchell as erythromelalgia, though in one or two the features were rather those of vasomotor paralysis. Collier lays a good deal of stress upon the value of the existence of this symptom in the diagnosis between functional and organic disease. He suggests the following explanation:

"In several of my cases there occurred at first only spontaneous attacks; afterward the conditions became frequently induced by the dependent posture, and later a condition of permanent vasomotor palsy of greater or less degree made its appearance, the attacks meanwhile continuing. This sequence suggests an irritative lesion of nerve-structures governing the bloodvessels being the cause of the vascular crisis and of the progress of this irritative lesion to a partially destructive lesion being the cause of the

persistent vasomotor palsy; these phenomena in vasomotor nerve elements being parallel with pain followed by anæsthesia in sensory nerve elements and with spasm followed by motor paralysis in motor elements. Weir Mitchell used the term 'vascular storm' in reference to this condition, and the term 'vascular crisis' would, I think, be very apt, occurring as it does in tabes associated with gastric and other sensory 'crises.' Probably the same fundamental pathological processes underlie both sensory and vascular crises. In all my cases the vascular change was never preceded by the sensory disturbance, but either preceded it or the two appeared simultaneously. It seemed as if the sensory disturbance was a local result of the altered vascular condition of the part. I would lay stress on the fact that erythromelalgia may be the first symptom of organic disease of the cord, and may be of great value in diagnosis, and especially valuable in the differential diagnosis between functional diseases and disseminated sclerosis."

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**The Mosquito and the Malarial Parasite.**—At the recent meeting of the British Medical Association in Edinburgh, PATRICK MANSON (*British Medical Journal*, September 4, 1898) read a most interesting communication on the malarial organism and the possibility of the mosquito being the intermediate host of this parasite. He first gives a brief account of the life-history of the human plasmodium malarie. Special reference is made to that octopus-like organism commonly known as "the flagellated body," with its two to six actively moving flagella. As this organism is never seen in the freshly drawn blood specimen, and as it appears only after the blood is allowed to stand for some considerable interval, Manson believed that it served some purpose outside the human body. As it is impossible for the organism from which this flagellated body develops to escape from the human body by itself, he looked about for some agent by which this could be effected. After due deliberation, he concluded that this agency was the mosquito, being doubtless influenced by the part which he had found this parasite to play in the transmission of the *flaria sanguinalis hominis*.

Manson believed that the latent parasite is sucked up by the mosquito, in the stomach of which it afterward becomes flagellated. He further thought that the flagella, after breaking off from the central sphere, by virtue of their inherent locomotive power penetrate the mosquito's stomach and enter some cell, and there start the extracorporeal life of the malarial parasite.

Whereas this was at first mere conjecture, the correctness of the theory was in part substantiated three years ago in India by Surgeon-Major Ross, who actually found the flagellated bodies in the blood contained in the mosquito's stomach after biting an infected patient. Two years later Ross actually discovered the pigmented extracorporeal parasite developing in the stomach-wall of "dappled-winged" and gray mosquitoes.

At first it seemed difficult to explain the occurrence of pigment in the parasites found in the stomach-wall when no pigment is contained in the flagella. McCollum's important observations on the halteridium, a parasite of birds, offered an explanation on this point. He observed that quite commonly free flagella fertilized a certain type of the organism in the bird's blood, the product being a very actively moving vermiform, which was very destructive to red and white corpuscles with which it came into contact.