

probability, their seat in the spinal system of nerves. Whether the nerves originated in the skin, or in the mucous membrane, the effect was the same spasmodic action; for that in no diseases purely of the substance of the brain, unaccompanied with pressure or irritation of the spinal cord, was there any symptoms of spasm or convulsions. He particularly instanced the dreadful malady epilepsy, showing that in all cases this disease was an affection of the spinal system of nerves, originating in the one extremity of system, and propagated to the other; so that we had an intense excito-motory influence produced without the person being conscious of the actual cause—in fact, an action similar to that which influenced the frog's leg. In the very worst cases of epilepsy the impression was upon the muscles of the neck, affecting the muscles of the larynx, causing a closure of the glottis, preventing the air passing down into the lungs, the necessary oxygenation of the blood, and the excretion of carbon from the lungs; this excretion being retained, became a source of poisoning to the blood, and when sent to the brain, acted as other deadly narcotic poisons, causing insensibility and temporary disease of the substance of the brain. If the amount of the spasmodic influence upon the muscles of the neck was even more extensive, the large veins returning the blood from the brain were compressed, and a condition similar to that of apoplexy was the result; this might possibly cause death. It lasted as long as the spasmodic influence continued, and returned at every epileptic attack: this being frequently repeated by degrees, brought on permanent disease of the substance of the brain, idiocy, and complete imbecility. To prevent these dreadful consequences, the Dr. stated that he had in some cases made an opening into the trachea, and had inserted a tube, so as to permit the patient to breathe, and to prevent the effects of the impure blood upon the brain; which, in some cases, cured the epileptic attack.

---

Proceeding with his experiments, he also removed the head, and all the viscera of the frog, and with them the centres of the sympathetic nerves, and still the power of reflex action was present, apparently unimpaired by the condition. The heart continued to move after it was removed from the body, so also did the intestines, showing that their involuntary action was neither dependent upon the brain, nor the spinal system of nerves. The Dr. claimed to be the discoverer of the spinal system of the nerves, having been the first to show their distinction from the sympathetic system, which is supplied to the viscera to