

ON THE AUTONOMY OF THE HEART.

BY GUIDO BELL, M.D.
INDIANAPOLIS, IND.

In the last number of the *American Journal of Medical Sciences*, Prof. I. M. Da Costa has published eight cases of weak heart, where the causation of neurasthenia and organic disorder, as valvular lesion or fatty degeneration had to be excluded.

He is inclined to attribute this weakness to the influence of the heart ganglia. Notwithstanding, Romberg¹ in compiling the recent experimental researches on the heart, has proven that the animal heart is active by itself and is regulated only by the sympathetic and pneumogastric nerves.

The heart's action never could be fully explained, neither in normal nor abnormal condition by its innervation. There was a supposition that Remak's ganglia promoted the activity of the heart; but embryologic researches revealed the fact that the heart is active before it is reached by these nerve centers, and, furthermore, that these centers spread out only sensory nerve filaments. Then nerve-cells in the heart muscle were looked for, but in vain.

If a man of high repute and large experience does not accept what seems to be an established law theoretically, it is in order to report all pathologic experiences which may be apt to sustain theory.

This is so much more justifiable in a case where a phenomenon can not be explained, except by assumption of what was found theoretically to be the truth.

In an article of the Cincinnati *Lancet-Clinic* of Sept. 19, 1891, I have reported three cases where a peculiar noise of the heart was heard at a distance during the shock. The sound was systolic and appeared not immediately after the injury, but later and stronger, according to the severity of the shock, and lasted until the organism revived and both sounds became audible again.

Both my cases recovered. I could not give a satisfactory explanation at that time, but in a paper read before the Marion County Medical Society in Indianapolis, March 28, 1893, I said that the peculiar noise of the heart heard at a distance during the shock can not be explained, unless the autonomy of the heart is accepted.

The heart meets an undue resistance in the collapsed arteries, and not being restrained by its regulating nerves is working excessively, thereby causing the undulations in the heart region visible through the bed-covers, and the sound audible at a distance of fifteen steps.

I also spoke of the following case: On Jan. 4, 1893, I was called to see John M., at 10 o'clock in the evening. I saw the man, who was 63 years old, half an hour later, lying in a bed without any sign of life.

He was walking the floor after an ordinary day's work, apparently well and in his usual way, when he fell backward without stumbling and lay perfectly motionless. This had happened a short time before 10 o'clock. I found him at 10:30 p.m. with eyes half open, pupils moderately dilated, immovable, lids languid, lips cyanotic, cold skin on face and extremities; temperature in axilla below 95 degrees F.; no respiration; different examinations were made; no pulse at the wrist, but the heart was beating regularly, not much weaker than in life, twenty-one beats

in fifteen seconds. I counted the heart's sounds seven times, and also my own pulse which was eighteen beats in fifteen seconds. The man was dead, notwithstanding the beating heart. I injected one one-hundredth grain of nitro-glycerin hypodermatically. A few minutes after 11 o'clock the heart's action became irregular and soon ceased.

These pathologic phenomena fully approve Romberg's statement of the autonomy of the heart.

Austin Flint in his text-book on "Human Physiology" says: "The heart seems to act without any palpable excitation." But if both experimental researches and clinical experiences forward such strong evidence, it seems not to be immodest to formulate Prof. Flint's assertion more positively by saying: "The heart does act without any palpable excitation."

FACIAL ERYSIPELAS—TREATED WITH EXTERNAL APPLICATIONS OF GUAIACOL.

BY CHAS. J. WHALEN, M.D.

INSTRUCTOR IN LARYNGOSCOPY, AND CHIEF ASSISTANT TO THE CLINIC
FOR DISEASES OF THE NOSE, THROAT AND CHEST, RUSH MEDICAL
COLLEGE; CLINICAL ASSISTANT TO THE CHAIR OF SURGERY,
CHICAGO POLICLINIC.

A review of the latest literature on erysipelas reveals, on the whole, a very unsatisfactory state as regards the treatment, and marked discrepancies exist in the writings of different authors on the subject. On this account I wish to place before you some observations based on a personal experience with this disease, treated by the external application of guaiacol.

Etiology.—Dr. J. M. Anders of Pennsylvania, gives elaborate statistics to prove that debilitating diseases greatly predispose to this disease. The primary cause is the streptococcus erysipelatosus discovered by Fehleisen. Jordan is of the opinion that the specificity of Fehleisen's erysipelococcus is questionable, and that its identity with the streptococcus pyogenes is probable. He has studied this subject carefully with reference to this question, and has drawn from his observation the conclusion: That erysipelas is etiologically not a specific disease; that, as a rule, it is caused by the streptococcus pyogenes, but that it may be provoked also by the staphylococcus pyogenes aureus.

These cocci which are so nearly identical with the streptococcus pyogenes, are found chiefly in, and spread along the capillary lymphatics of the skin. Recklinghausen and Lukowsky found them in the lymphatic vessels and connective tissue spaces in the structure affected by erysipelas. Fehleisen found cocci in chains constantly present in bits of skin excised from the spreading edge of an erysipelas rash; they lay in the lymphatics chiefly of the superficial part of the corium, never in blood vessels, and only exceptionally in the connective tissue spaces, or in the immediate vicinity of blood vessels.

Erysipelas spreads along the superficial lymphatics, but not necessarily in the direction of the lymph current, which may be temporarily arrested by blocking of the interior of the lymphatics with cocci. As this microbe is non-motile, its transportation in a direction opposite the lymph current can only occur by reproduction.

In the facial form, when no wound is visible, it is

¹ In Berlin klin. Woch., March 27, 1893.