tion, pain, anger, injury, heat, cold, asphyxia, and shock. The parasympathetic nerves and parasympathicotropic glands of internal secretion provide the body with an appetite and the secretions—salivary, gastric, biliary, pancreatic, and intestinal—for the digestion of food, and motor power to the gastrointestinal tube, for mixing the food with the secretions and propelling it onward, and for expelling the refuse from the body.

Tinel. PAIN OF VEGETATIVE NERVE ORIGIN. [La Presse Méd., April 2, 1921.]

Sympathetic (not psychogenic) pains are here discussed. They were found in the limbs, trunk, and face, and he describes in detail six cases in which burning pains and sensations of cold, weight, and fulness occurred in the hand, legs, face, penis, and other parts without any of the more orthodox neurological findings. He compares these sensations in their nature and chronicity to the sensations in causalgia following injury to peripheral nerves and advances arguments to prove that irritation of sympathetic nerves is the cause of these symptoms. He considers that many pains, the cause of which cannot be determined clinically, are due in all probability to sympathetic irritation. He bases his arguments on the fact that in the cases described the sensations were of a kind, *e.g.*, feelings of tension, fulness, weight, and burning heat. Objective signs were absent. The sensations were paroxysmal, had a tendency to become accentuated and to spread, and frequently occurred after excitement and emotion.

Daniélopoulu, D., and Carniol, A. NEW FACTS SHOWING THE ACTION OF ESERINE ON THE SYMPATHETIC. [Compt. Rend. Soc. de Biol., LXXXVI, April 29, 1922, p. 883.]

The writers have previously shown that eserine is not exclusively a vagotropic substance, as commonly held, but is amphotropic. Its action in normal man, by intravenous injection, shows two phases, an early, quickly on-coming transient sympathicotropic phase, showing acceleration of rhythm and hypertension, and a later, prolonged vagotropic phase of slowing of rhythm and hypotension. Eserine is, thus, an amphotropic substance, with, however, a vagotropic predominance. The writers now show that the initial acceleration of rhythm is due to its action on the sympathetic and not to a paralysis of the vagus, for the vagus remains very excitable during this early phase, as is shown by the great slowing of cardiac rhythm which occurs on applying pressure on the eyeball at the moment of the maximum acceleration. After the injection of eserine the writers find a phenomenon of rhythm which is produced also after the use of adrenalin, *viz.*, sinusal arrhythmia in the period of complete acceleration; this is due, not to an exclusive vagus hyperexcitability, but to an excitation of both of these two antagonistic systems. During the phase of acceleration extrasystoles appear, a sign of excitation of hetero-

topic centers. Eserine produces extrasystoles even when the vagus is paralyzed by atropine. [Leonard J. Kidd, London, England.]

Papastratigakis. SYMPTOMS OF SYMPATHETICOTONIA. [Grecè Médicale, April, 1921, XXIII, No. 4.]

This author raises a dissenting voice against some recent reports which state that pilocarpin exerts a tonic action on the pneumogastric, and that the sweating crises do not form part of the actual sympathetico-tonic response. The bradycardia after pilocarpin injection is not due to a tonic action on the pneumogastric but, according to his observations, to a disturbance of the balance between the sympathetic and the pneumogastric by which the vagus action becomes overaccentuated.

II. SENSORI-MOTOR NEUROLOGY.

1. PERIPHERAL NERVES—GENERAL.

Schaffer, K. CHARACTERISTICS OF HEREDITARY DEGENERATION. [Schweiz. Arch. f. Neur. u. Psych., 1920, VII, No. 2.]

The histological characteristics of the diseased tissues found in the familial nervous disorders according to Schaffer are determined by uniform embryologic changes in the central nervous system. Diseases of a familial hereditary type are not only clinically but anatomically alike. The so-called diagnosis will depend chiefly on the localization, the extension and the intensity of a uniform type of process.

Mackenzie, J. THE THEORY OF DISTURBED REFLEXES IN THE PRODUCTION OF SYMPTOMS OF DISEASE. [B. M. J., Jan. 29, 1921.]

Sir James Mackenzie enunciates and develops the theory that the vast majority of the symptoms of disease are disturbances of normal reflexes. In many diseases all the symptoms on which a diagnosis is based are reflex in origin—in some the reflexes are disturbed by the entrance of the stimulus through the nervous system, and in others the disturbance is through the circulation. To the former belong the symptoms of such diseases as gastric ulcer, renal calculus, gall-stone disease. The symptoms in infections are due to the disturbance of the reflexes through the circulation, as influenza, malaria, typhoid and typhus fevers, measles, and abscess formation, apart from the swelling. In some diseases one gets a mixture of both kinds of reflexes, as in appendicitis, where there is not only the local pain and tenderness of the tissues of the external body wall, with contraction of the muscles of the abdomen, but the feeling of exhaustion, rapid pulse, tendency to vomit. In cholecystitis one gets a similar complex. The need for the more accurate recognition of symptoms is seen when it is considered how difficult it is to diagnose even such seemingly simple affections as gastric ulcer and appendicitis.