

C. A. F., male, aged 35, admitted to Military Hospital, No. 2, Havana, Cuba, April 13, 1899 at 12 m. About two hours before admission he had fallen down a shaft a distance of about twenty feet. He did not recall exactly how he alighted. Immediately after the accident he was unable to stand, and complained of pain in the back and abdomen, especially when moved.

Examination revealed minor bruises about the body, motor paralysis of both the lower extremities. The power of internal rotation of the thighs was retained; he had control of the abdominal muscles.

Patellar, plantar and cremasteric reflexes were absent on both sides. The abdominal reflexes were present but apparently diminished. The bladder and rectum were paralyzed; there was retention of both urine and feces.

Analgesia of the legs and feet extended up to the knee. In this area, however, he had still the sense of pressure, but a loss of the sensation of heat and cold.

The next day the conditions were unchanged, and in addition he complained of considerable pain, girdle in character, in the back and lower abdomen.

On April 16 I was able to test the muscles of the leg with a faradic current and obtained some reaction. Galvanic tests were impossible. There had been no movement of the bowels since admission and no voluntary evacuation of the bladder. At 3 p.m., April 16, about seventy-seven hours after the injury, the operation of laminectomy was performed. The arches of the twelfth dorsal and first lumbar vertebrae were removed. The arch of the twelfth dorsal vertebra was found pressure upon the cord. There had evidently been a dislocation of the twelfth dorsal forward, with perhaps a fracture of the first lumbar, so that the cord was pressed between the body of the first lumbar and the arch of the twelfth dorsal vertebra.

The dura mater was not opened. There was no apparent hemorrhage, the cord being quite firm to the touch, with no perceptible injury. Six days after the operation he passed his urine voluntarily, and had a voluntary movement of the bowels. Three bed-sores about the size of a silver dollar had developed over the sacrum and tuberosities. On the 26th a considerable increase in muscular power was noticed; he could flex the thighs on the abdomen, and the leg on the thigh. The wound had healed by primary union. From this time on his condition constantly improved, the motor control of his lower extremities gradually increasing in extent and power. The extent of the analgesia had markedly diminished. On May 6, 1899, the patient was discharged from the hospital and took passage on board the steamer to return to Lancaster, Pa. His condition on the date of discharge was as follows:

Evacuation of the bowels was regular and under full control; micturition was voluntary, and under control; there was a slight cystitis present. There was analgesia extending over both feet and ankles and reaching half-way to the knee.

He had flexion, extension, adduction and abduction of the thighs, flexion and extension of both knees, and some slight extension of both toes on the right side, otherwise the muscles below the knee were paralyzed. There was no voluntary motion of the ankle-joint.

The knee-jerks were present, as well as the cremasteric and abdominal reflexes. There was no ankle-clonus. The three bed-sores had very much diminished in size and were covered with healthy granulation.

On Nov. 5, 1899, I received a letter from him, from Lancaster, Pa., in which he stated that his condition was very good. His bed-sores had entirely healed, the cystitis had almost disappeared, and, by means of two canes, he was able to get about. For the past three months he had been able to support himself and his family, as a cigar-maker. He had full control of his bladder and rectum. He can flex and extend the knees and the toes.

Sick and Wounded in China.—Most complete arrangements have been made for the care of the sick and wounded in the Chinese campaign. Abundant medical stores, supplies, hospital tents and stoves have been provided. As, on account of the nature of the situation, a general hospital would be impracticable, a suitable field hospital will be established close to the field of active operations. Major-Surgeon John Van R. Hoff, U. S. A., will be placed in charge of this hospital. He is now on his way from Porto Rico to his new post of duty.

ANGINA PECTORIS.*

AUGUSTUS A. ESHNER, M.D.

Professor of Clinical Medicine in the Philadelphia Polyclinic, Etc.
PHILADELPHIA.

While the use of the Greek prefix "pseudo," or its English equivalent "false" in medical nomenclature is at times a matter of convenience, it may become a source of confusion or misunderstanding. This is exemplified in the use of the term "pseudo-angina pectoris."

Although the question of the pathology of angina pectoris is not definitely settled, it seems not unreasonable to attribute the symptoms of the affection to derangement in the function of the cardiac plexus of nerves, usually induced through interference with the circulation in the coronary arteries, or through disease of the myocardium.

In addition, however, to cases in which such vascular or myocardial disease is present, there are other cases in which similar symptoms arise, in the absence of appreciable organic disease referable to the heart. To this latter condition, the designation "pseudo-angina pectoris" has been applied, and among the etiologic factors, toxic and neurotic states have especially been mentioned. It seems more logical, however, to include both sets of cases in the same group, even though they differ in intensity, clinically, as well as pathologically, and it were, perhaps, better to distinguish them rather as mild and severe, than as false and true.

We have here an illustration of the difficulty of attempting a distinction between organic and so-called functional disease. It is difficult to conceive of derangement of function without alteration in structure. Functional activity must itself be looked upon as an expression of metabolic activity, and aberration of the former would accordingly bespeak deviation of the latter from the normal. Disorder of function may, therefore, be referred to influences varying in degree from impalpable nutritional disturbance to gross organic lesion. Between these extremes there may be all gradations. It can further be understood that long-continued or frequently repeated nutritional disturbance may lead to structural and ultimately to organic disease.

Of the several explanations that have been proposed for the occurrence of the symptoms of angina pectoris, viz.: That these are due to neuralgia of the cardiac nerves, spasm of the heart-muscle, stretching of the ventricular wall, and anemia of the myocardium, it is not impossible that each or even all have some share in their causation. In this way the paroxysm may be induced by organic disease, or by spasm of the coronary arteries, or of the muscular wall of the heart, acute dilatation and toxic states, singly or in association.

The essential features of angina pectoris are its paroxysmal occurrence, the presence of intense precordial pain and a sense of anguish and impending dissolution. Those who undertake to maintain a distinction between true and false angina pectoris, consider a fatal issue an additional feature; but in this connection it is worthy of mention that there may be grave disease of the coronary arteries and myocardium, even terminating fatally, without symptoms of angina pectoris, and, conversely, it does not seem extravagant to believe that angina pectoris may exist in the absence of gross or appreciable changes in the vessels or the heart-muscle. The element of death further, would hardly be a safe criterion, inasmuch as it can scarcely be attributed to the attack of angina pectoris itself, but is rather to be ascribed to

*Read before the Section on General Medicine of the College of Physicians of Philadelphia, May 14, 1900.

the fundamental disease of the vessels or the heart-muscle, and it would occur only when this is present.

True, or severe, angina pectoris is said to occur principally after the fiftieth year of life. Of forty cases referred to by Osler in his admirable monograph, only four were under forty (one at thirty and one at thirty-two), the average age being fifty-three. He adds that cases are reported in young individuals, even in children; but then almost invariably in association with chronic valvular disease or adherent pericardium. The cases of mild, or so-called false, angina pectoris, it is admitted, may occur at any age, and even in early life.

Osler in his text-book tabulates as follows the points of differentiation between true angina and pseudo-angina.

TRUE ANGINA.	PSEUDO-ANGINA.
Most common between the ages of 40 and 50 years.	At every age, even 6 years.
Most common in men.	Most common in women.
Attacks brought on by exertion.	Attacks spontaneous.
Attacks rarely periodic or nocturnal.	Often periodic and nocturnal.
Not associated with other symptoms.	Associated with nervous symptoms.
Vasomotor form rare.	Vasomotor form common.
Agonizing pain and sensation of compression by a vise.	Pain less severe; sensation of distension.
Pain of short duration.	Pain lasts one or two hours.
Attitude: silence, immobility.	Agitation and activity.
Lesions: sclerosis of coronary artery.	Neuralgia of nerves and cardiac plexus.
Prognosis grave, often fatal.	Never fatal.
Arterial medication.	Antineuralgic medication.

These differences depend largely upon the character of the respective underlying pathologic processes, but herein does not seem to reside sufficient reason for separating the two groups of cases entirely. Neuralgia may be purely a neurosis, or it may result from nerve-lesions, traumatic and inflammatory, neoplastic, etc. A similar conception appears not inapplicable also to angina pectoris.

I beg to report a case that I believe to be one of true or severe angina pectoris occurring in a young man 30 years of age and unattended with organic disease of the heart or vessels.

G. G., aged 30, a nurse, was received into the Polyclinic Hospital on September 12, 1899, suffering from sharp, knife-like pain, extending from the heart to the left shoulder, and down the left arm. The attack had set in while the patient was riding in a street-car after a day of hard work. No physical abnormality whatever was detected, and pulse, respiration and temperature exhibited no noteworthy deviation from the normal. The family history was insignificant, except that the maternal grandfather had died from an apoplectic seizure. The patient himself had had scarlet fever, measles, and mumps, and was rather delicate as a child. I believe he was not addicted to the excessive use of tea, coffee, tobacco or alcohol. He had suffered from rheumatic pains and swelling in the knees and ankles for several successive springs. Two years previously, following an attack of rheumatism, he was seized with the first of a series of paroxysms like the present. The second attack occurred seven months later; and others had taken place at intervals of six months. Each attack had begun with a severe paroxysm, and was attended for twelve hours afterward with a number of lesser severity, followed by a period of collapse for about a week. The attacks usually came on after over-work or excitement. This history was essentially repeated while the patient was under observation in the hospital, several paroxysms occurring, though none so severe as the first. The treatment consisted in the administration of amyl nitrate in pearls by inhalation, hypodermic injection of morphin, the administration of nitroglycerin internally, and applications of heat and counter-irritation to the precordium. Subsequently strychnin and atropin were

also given, and the patient was discharged after the lapse of ten days, quite restored to his usual condition.

As already stated, I have little doubt that this case is one of true angina pectoris, although no evidence of organic disease of the heart or the vessels could be made out. It is, however, not impossible that, as a result of the earlier attacks of rheumatism, insidious changes had been set up in the myocardium or the coronary arteries, to which the conditions present are to be attributed.

Therapeutics.

Treatment of Hay-Fever.

In his article on Hay-Fever, in the "Twentieth Century Practice of Medicine," Dr. E. F. Ingals speaks of the importance of observing the following things in the management and treatment: 1. The condition of the constitution predisposing to the attack, such as a rheumatic or gouty diathesis or disturbance of the stomach or bowels. 2. The neurotic tendency. 3. The hyperesthetic mucous membrane.

The constitutional treatment especially should precede the usual time of the attack at least one month or six weeks.

The following prescriptions are based on the outline given above:

- R. Liquoris potassii arsenitis.....3i 4
Tinct. nucis vomicæ.....3ii 8
Tinct. gentianæ composita, q. s. ad.....3iii 96
M. Sig. One teaspoonful after each meal in water.
- R. Sodii arsenatis.....gr. i 06
Ext. nucis vomicæ.....gr. viiss 5
Ferri sulphatis.....gr. xlv 3
Sodii carbonatis.....gr. xlv 3
M. Ft. capsulæ No. xxx. Sig. One capsule after each meal three times a day.
- R. Quinina hydrobromatis.....gr. xxx 2
Sparteina sulphatis.....gr. viiss 5
Ext. hyoscyami.....gr. x 66
Pulv. camphoræ.....gr. xxx 2
M. Ft. capsulæ No. xxx. Sig. One capsule every four hours.
- R. Liquoris sodii arsenatis.....3i 32
Tinct. belladonnæ.....3i 4
M. Sig. Five drops in water after meals, as a prophylactic measure.

- R. Zinci valerianatis.....gr. iii 18
Asafœtidæ3iiss 6
M. Ft. capsulæ No. xxiv. Sig. One capsule after each meal.
- R. Syrupi acidi hydriodici.....3iii 96
Sig. One teaspoonful after each meal three times a day.

This preparation is beneficial when there is a history of a rheumatic diathesis. If necessary this could be given alternately with some one of the above prescriptions.

- R. Liquoris potassii arsenitis.....3i 4
Potassii iodidi3iiss 6
Vini pepsini, q. s. ad.....3iii 96
M. Sig. One teaspoonful in water three times a day.
- This combination is of value as a prophylactic measure and during the attack in rheumatic patients.

- R. Brucina phosphatis.....gr. iii 18
Ext. hyoscyami.....gr. xv 1
Quinina valerianatis.....3i 4
Camphorægr. xxx 2
M. Ft. capsulæ No. xxx. Sig. One capsule four times a day.

Dr. E. Fletcher Ingals recommends the above prescription, which in his experience has seemed the most beneficial in warding off the attacks. He also states that this combination is not only advantageous in delaying or preventing an attack, but it seems to be of much value in mitigating the patient's suffering during its progress.

Brucin, as is well known, is one of the alkaloids of nux vomica and, as compared with strychnin, is less bitter, slower in its action and twelve times weaker.

- R. Ext. nucis vomicæ.....gr. viiss 50
Ext. hyoscyami.....gr. x 66
Salopheni3ii 8
M. Ft. capsulæ No. xxx. Sig. One capsule four times a day.