

Neurology.

EPILEPSY TREATED BY ANTIPYRIN; ANGINOID ATTACKS DUE TO SUBACUTE INFLAMMATION OF THE AORTA.

CLINICAL LECTURE DELIVERED AT THE UNIVERSITY HOSPITAL, PHILADELPHIA

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GENTLEMEN,—I bring before you this morning a young woman who has been under observation for two years and four months. She came here with a distinct history of epilepsy, from which she has suffered for three or four years. The attacks, however, were not frequent at first, occurring only at intervals of seven or eight months. They always occurred at night, and the paroxysms were evidently severe. She was twenty-four years of age when the spells first began. When she came here she had been under medical treatment for some time and had taken a great deal of the bromides. She was so much depressed, anæmic, and weak from the effects of these agents that, as the spells occurred only once in eight months, it seemed unwise to continue this drug, and we asked ourselves if there was not some way of eradicating this tendency without keeping the woman for long periods of time under a remedy so depressing. This is a point of great importance, to which I have alluded on other occasions. We therefore carefully regulated her diet and the hygiene of her daily life. We insisted that she should eat slowly and chew properly, and we regulated her rest and work. In addition we gave her antipyrin in five-grain doses at night, in the hope that it would exert such an influence upon the peripheral vessels as to prevent them from passing into the state of spasm which appears to constitute the initial stage of a convulsion.

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Our belief is that the first stage of a convulsion is associated with a spasmodic condition of the minute arterioles and peripheral vessels, as is shown by pallor of the surface. When the physiological action of antipyrin was discovered, it at once suggested itself as a preventive of convulsions, and it has been used in many diseases presenting such conditions. Phenacetine has been used in the same way. I am forced to say that, like all other drugs, it has proved itself most irregular, sometimes doing a great deal of good and at other times exerting no apparent effect, and where its use is associated with a thorough regulation of the details of the patient's life it is impossible to determine how much is due to the latter and how much to the use of the drug. This patient has never had an attack since she was put under this treatment. For a little while after she came here she continued to have what she had before and what she described as "little things in her head," which appeared to be attacks of *petit mal*. Her general health has improved, and she has gained in weight and flesh. She also took a pill of proto-carbonate of iron and carbonate of potassium after each meal. This she has continued. The antipyrin was taken steadily for two years. For the past two and a half months it has been stopped, and she has had no spell. The disease is evidently checked, but how far this can be considered a cure I cannot say. How far this woman could overwork herself, be imprudent in her diet and disturb her digestion, without bringing on a spell, I neither know nor want to know. I want her to go on carrying out the same course of life she has been doing and gradually to drop all medicine. I prefer to depend more upon hygiene than upon drugs. We shall have her continue to report to us every two months.

ANGINOID ATTACKS.

This patient, T. J. R., forty-five years old, comes from a neighboring town. He was a letter-carrier for five years on a long suburban route, carrying a heavy bag. For the past six years, that is, since a year before he was appointed to the position of letter-carrier, he has had attacks of distress when walking. He has been in the habit of taking his meals irregularly, eating rapidly, without chewing the food properly. Six years ago he began to notice that on walking he had a sense of pressure in the pit of the stomach, and that if he continued it went into the arms and down to the wrists and sometimes to the fingers. It was worse on the left side. He would then have to stop walking for a minute or so, when the feeling would pass off. After he began work as a letter-carrier his business tended to make it worse,

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and he suffered more or less every day, sometimes having to stop one or two dozen times on his route. As soon as he rested for a while it went away, and when he is quiet he has no attacks. He raises a more or less bitter liquid, especially after meals. He has been temperate in regard to the use of alcohol, but has used tobacco to a certain extent. The pain continued to grow worse, and three months ago he gave up his business on account of it.

A case of this kind of course raises the question of diagnosis as between some vascular lesions, some gastric lesions, and a pure neurosis. The symptoms are anginoid in character. The spells are not true spells of angina pectoris. They begin in the epigastrium and extend upward to the shoulder and down the arm. True angina comes on in the præcordial region and extends chiefly to the left arm, but it may extend down both arms. The attacks here do not come on suddenly, like the spells of true angina pectoris. They are not attended with the same sense of constriction and inability to breathe, and often sense of impending death, that mark true angina; but these attacks are brought on distinctly by exertion. He can bring them on at will; when he wills to be quiet he has no attack. You meet with a great many more cases like this than of true angina pectoris. These cases last almost indefinitely and are capable of great relief, while true angina pectoris is attended with great danger of sudden death.

The first question that you wish to settle in a case of this kind is whether or not there is organic disease of the heart. You meet with many cases like this where the examination shows lesions, especially about the aorta. You find an aortic murmur, and with this you may find hard radials, arcus senilis, and accentuation of the second aortic sound, and all the evidences of a high degree of atheroma of the aortic arch. This man has a good deal of arcus senilis for a man forty-five years of age. There is quite a crescent at the upper part of the cornea. This is due to fatty degeneration of the layers of the cornea, and it is an indication of degeneration of the tunics of the arteries, which is often associated with atheroma. When this is found with hard radials and hard carotids it is suggestive of atheroma of the aorta. You, however, meet with many people with arcus senilis who enjoy such excellent health that it is evident that the aorta is not diseased. When you have hard radials and resisting carotids you may conclude that the aorta is involved, for the disease usually affects the aorta before the radials. In this case the radials do not seem to be hard. It is especially where there are evidences of disease of the aortic valve and stiffness of the aortic arch that these symptoms are present. The explanation is easy.

The patient attempts to walk or exercise; this stimulates the circulation, and the heart acts more energetically; but when it tries to drive a larger amount of blood into the aorta, the walls of which are stiff and unyielding, the heart beats against a resisting wall, and a cramp of the heart or a cramp of the aortic wall results. This causes pain, and the patient is compelled to rest until the circulation quiets down. As soon as he exerts himself beyond a certain point the pain returns. This pain is evidently due to the inability of the aorta to expand in response to the vigorous action of the heart due to exertion. You find these symptoms in all degrees. Some can walk but not run. Others cannot walk a few steps without having this anginoid pain. *In this case the heart-sounds are clear. There is a little accentuation of the second sound over the aortic area, as though the valve was a little stiff. The radials are not distinctly hardened. The carotids are not resisting. There is no cardiac murmur. There is no evidence of organic heart-disease or of marked atheroma of the arch of the aorta. We find these cases often with lesions of the aortic valve and arch of the aorta; but we find them also in people who have no such lesions or in whom we cannot demonstrate them. In such cases I am sure there exists at times simply a slight degree of arteritis, and that the aortic walls are irritable and are tender on account of a low grade of irritation. I have seen patients who after a mountain trip or a fatiguing hunting expedition have begun to present such symptoms as we have here and who have become so bad as to have to be confined to bed. Under proper treatment they have recovered and remained well. I have seen patients who presented alarming conditions and for months at a time have had such symptoms in an aggravated form, but who for ten or fifteen years have been well, with no return of the symptoms. There is then a condition of subacute arteritis, affecting the tunics of the aorta principally, possibly due to rheumatism, gout, syphilis, or over-exertion, where the artery becomes tender, and when the heart drives more blood into it, forcing it to expand, it passes into a painful state, compelling the patient to rest until the heart quiets down. When you meet with a case of this kind in a comparatively young man, and when the disease is distinctly of this mechanical anginoid type brought on by exertion, passing away when the exertion ceases, and when the examination fails to show organic valvular disease or evidences of atheroma of the aorta, such a case is hopeful in its prognosis, and should be treated on the supposition that there exists a subacute irritative condition of the root of the aorta. Such a case should be treated by graduated exercise, and if it is very bad you may be obliged to put

the patient at absolute rest. I have been forced to keep patients in bed for sixty days. The diet should be carefully regulated. You do not want the patient to have too much blood, and you want no flabby tissue to oppose resistance to the action of the heart. Counter-irritation over the aorta by blisters or the light cauterium should be employed. The patient should be put on long courses of iodide of potassium with small doses of mercuric bichloride, or of iodide of potassium with sodium salicylate. Under the hygienic treatment, which, after all, is as efficacious and as important as the medicinal treatment, and with counter-irritation, we may hope to see such patients recover. We would not begin the use of nitrite of amyl, nitro-glycerin, and such agents. It is not a neurosis, as angina pectoris sometimes is. This is dependent upon a definite physical change; it is a definite mechanical condition; and we do not want to accustom the patient to these drugs, to which he would quickly become addicted, but we want to get rid of the local condition that is present. This patient should be urged to take gentle exercise, but never sufficient to bring on the pain. He should try to tone down in regard to his flesh, take proper food and chew it thoroughly. Such cases as this are numerous, and you will usually find that if you treat the patient properly you will be able to give him a great deal of relief, if not entirely cure him.

OBSTETRICAL PARALYSIS; MULTIPLE NEURITIS AND ITS RELATION TO DISEASES OF THE SPINAL CORD.

CLINICAL LECTURE DELIVERED AT THE HARVARD MEDICAL SCHOOL.

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GENTLEMEN,—In a previous lecture¹ I spoke of the so-called obstetrical paralysis of infants, due to injury of the nerves of the brachial plexus, especially the fifth and sixth, and I referred to the important suggestion made by my colleague, Dr. C. F. Carter, that this form of paralysis is not due to pressure, as has been heretofore supposed, but to the stretching of the cervical nerve-roots on account of the position of the head during labor, and especially under traction. I refer to the subject again now merely to introduce the photographs of a striking case which has recently come under my care in the Massachusetts General Hospital.

It will be remembered that the muscles usually affected are those which rotate the arm outward, abduct the arm at the shoulder, and flex the forearm, frequently also the extensors of the forearm, and sometimes the extensors of the hand and fingers. Usually the child's arm hangs close to the side, extended, and rotated more or less strongly inward.

In the case illustrated by these photographs the arm is drawn up, as you will see, by a strong contraction of the upper portion of the pectoralis major and probably the anterior part of the deltoid, though it is difficult to determine this by the finger. The contraction is so strong that some effort is required to overcome it. The arm can be drawn down into its normal position, but quickly returns to that represented in Figs. 1 and 2, evidently because the antagonistic muscles are para-

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