

(G. L. Walton and W. E. Paul)²⁹ even speak of intermittent claudication of the lower extremity as "angina cruris." "Angina cruris," like "angina pectoris," occurs much more frequently in men than in women. The interest of the present case lies chiefly in the remarkable spastic contraction of the minute cutaneous blood-vessels of the foot which precedes the muscular cramp-like pains (angina cruris). For this reason the case might almost be described as one of "angina cruris (or rather angina pedis) vaso-motoria." It presents in this respect a striking analogy to the form of angina pectoris described by Nothnagel³⁰ (1867) as "angina pectoris vaso-motoria," in which the painful phenomena of angina pectoris were preceded by contraction of cutaneous blood-vessels. Nothnagel in his cases thought that the whole symptom-complex was of vaso-motor origin and that there was no organic disease present, but by necropsies on two cases of angina pectoris with very decided vaso-motor symptoms Hans Curschmann³¹ proved the presence of sclerotic changes in one of the coronary arteries. Just as there are cases of angina pectoris ("pseudo-angina") without organic disease of the coronary arteries, so according to Oppenheim and Hans Curschmann³² there are probably also cases (though rare) of intermittent claudication of extremities without organic arterial disease—a "dysbasia intermittens angiospastica" in contradistinction to "dysbasia intermittens arteriosclerotica." So also A. Westphal³³ has recently described the case of a woman, aged 43 years, suffering from recurrent attacks of a vaso-motor neurosis, during which temporary absence of pulsation in the dorsalis pedis artery was noted.³⁴

The congested condition of the foot in the present case and in similar cases (best marked, of course, with the limb in the dependent position) is, I believe, of "conservative" nature, and it may be explained as an automatic attempt to compensate (for the arterial obstruction) by dilatation of capillaries and venules—that is to say, it may be explained as an automatic attempt to favour collateral circulation as far as possible, and to make up for deficiency of the arterial supply by increase of the total quantity of blood in the affected part.³⁵

Harley-street, W.

A NOTE ON CERTAIN PUPILLARY SIGNS IN CHOREA.

BY FREDERICK LANGMEAD, M.D. LOND.,
M.R.C.P. LOND.,

PHYSICIAN TO OUT-PATIENTS, PADDINGTON GREEN CHILDREN'S HOSPITAL; MEDICAL REGISTRAR, ST. MARY'S HOSPITAL.

LITTLE attention has apparently hitherto been paid to the changes in the movements of the iris muscles which are frequently to be seen in chorea. Most of the text-books confine themselves to the statement that the pupils are usually dilated, a few mention that inequality of the pupils has been described and that the smaller pupil is said to be on the side of the body which is more affected by pseudo-voluntary movements. For some years, during the routine examination of choreic children, I have observed and been in

the habit of noting other pupillary phenomena, a description of which it is the object of this paper to give.

1. *Hippus*.—The first is hippus. In many children who are more than slightly affected by the ordinary sthenic type of chorea the movements of the iris are extraordinarily wide and rapid. This is readily explained by the jerky movements of the eyeballs and the consequent quick and frequent variations in the amount of light which reaches the retina, and also the suddenly altering accommodation for the many objects which in turn are included in the visual field. This necessarily renders the detection of rhythmical oscillatory movements of the iris no easy matter, but during intervals of quiet these movements, which constitute hippus, are sometimes noticeable.

2. *Peculiarities of movement of accommodation*.—That the contraction of the pupils to accommodation may be extremely rapid and sudden has already been mentioned, but it will frequently be seen also, that the reaction is asynchronous on the two sides, one pupil contracting, while the other remains temporarily dilated. This is especially marked when the pupils are unequal, the larger usually reacting more slowly.

3. *Contraction*.—Contraction of the pupils both to accommodation and to light is usually ill-sustained, and here again the affection may be unequal, so that when both are contracted one will sometimes be seen, as it were, to tire out and dilate whilst the other remains small.

4. *Varying inequality of the pupils*.—It may be noticed in some cases that one pupil remains persistently smaller than the other during the complete examination. This may continue for several weeks and only be replaced by the normal equality when the child has recovered or, on the other hand, when next seen the pupils may be equal or that which was formerly the larger may now be the smaller.

5. *Eccentric pupils*.—Eccentricity of the pupils may occasionally be present and may become better marked when the pupil is contracted and less obvious when dilated.

As far as I have been able to judge, it would appear that these phenomena are by no means uncommon and bear no relation to any particular form of chorea. The pupil is no more often or obviously affected on the side on which there is greater movement, or paralysis, than on the other. Mere inequality of the pupils is of little significance, for it is commonly found among children, but I have not found the hippus, the altered accommodation, or the eccentricity of the pupils, in any other general condition, except articular or cardiac rheumatism. This is of slight interest from the point of view of the common etiology of rheumatism and chorea.

Oxford-terrace, W.

A CASE OF IMPERFECT DEVELOPMENT: ACRANIA.

BY ALEXANDER YULE, M.D. ABERD.

ON August 20th, 1906, I was called upon at 7.30 P.M. to visit a married woman, 27 years of age, who had been in labour since 2 P.M. of the same day. The pains were now constant and severe, with little, if any, intermission. The abdomen was of much greater size than is usual at such times and very tense. The child could not be distinctly felt through the abdominal walls. The membranes presented at a short distance from the external outlet but neither the os uteri nor the presenting part could be made out. The membranes meanwhile continued to descend slowly. Between 12 and 1 A.M. on August 21st the membranes ruptured with copious gushing of liquor amnii. I then introduced my hand into the vagina and found the cavity of the pelvis unoccupied but sufficiently extended to have received the head of a child at the concluding period of labour. I thereupon carried my hand upwards and reached a fairly well dilated os uteri immediately above the brim of the pelvis. The presentation could not be understood and appeared to be a rounded hardness, in conjunction with what suggested the idea of a small collection of bones. It was clear that delivery had to be attempted. The obstructions accordingly were put to one side, the hand was introduced into the uterus, a foot was seized, and delivery was speedily effected by version. For some time after this liquor amnii kept pouring away, saturating the bed and dripping through to the floor.

With regard to the aspect and conformation of the child,

²⁹ Walton and Paul: Boston Medical and Surgical Journal, April 3rd, 1902, p. 351.

³⁰ Nothnagel: Deutsches Archiv für Klinische Medizin, Leipzig, 1867, vol. iii., p. 309.

³¹ Hans Curschmann: "Ueber Vasomotorische Krampfzustände bei echter Angina Pectoris," Deutsche Medicinische Wochenschrift, 1906, vol. xxxii., p. 1527. See also E. Schmöll, "Ueber Motorische, Sensorische und Vasomotorische Symptome verursacht durch Koronarsklerose und sonstige Erkrankungen der Linkseitigen Herzhälfte," Münchener Medizinische Wochenschrift, 1907, No. 41, p. 2027.

³² Hans Curschmann: "Untersuchungen über das Functionelle Verhalten der Gefässe bei Trophischen und Vasomotorischen Neurosen," Münchener Medizinische Wochenschrift, 1907, No. 51, p. 2519.

³³ A. Westphal: "Ueber Hysterische Pseudotetanie mit Eigenartigen Vasomotorischen Störungen," Berliner Klinische Wochenschrift, 1907, No. 49, p. 1567.

³⁴ Organic vascular changes may follow recurrent angiospasm, as noted in some cases of very chronic Raynaud's disease, but in some of these cases it must be remembered that there may be a syphilitic element present (especially congenital syphilis).

³⁵ Cf. F. P. Weber: "Sequel of a Case of Trophic Disorder of the Feet," British Journal of Dermatology, 1902, vol. xiv., p. 392. In ordinary hæmorrhagic infarctions of the lung from embolisms we have, I believe, a striking instance of automatic attempts (though ineffectual ones) to compensate for arterial obstruction by extreme dilatation of capillaries and venules. On the other hand, "local syncope" due to temporary angio-spastic conditions (such as those readily excited in some persons by the application of cold) may, as is well known, be followed by reactionary hyperæmia when the vascular spasm ceases. Local congestion may, therefore, either accompany or alternate with arterial obstruction.

the accompanying illustration taken from the "Cyclopædia of Obstetrics" by Charles Clay, M.D., and published at Manchester in 1848, gives a better idea of the appearances presented than any verbal description could convey. The illustration is a precise representation of what was seen so far as shoulders and face went. The presentation is hereby also explained and the improbability of the child passing through the os uteri unaided, the shoulders and what represented the



head being between them and filling up the dilatation of the os uteri with the foetus beyond its circumference and within the uterus.

Hitherto her labours have been natural and she has three children. In most cases of defective development of this kind labour has been premature and the foetus dead. When the foetus is dead and premature it may be assumed that the superabundant liquor amnii described by observers in such cases would aid delivery by the free downward rush, accompanied by pains. Expulsion also would be facilitated by the circumstance of the yielding nature and quality of being easily moulded and compressed of that which is dead and decomposing in contradistinction to that which is alive. In the present case there was no descent of the child on account of malposition. Had Nature been left to her unaided efforts there is reason to believe that the liquor amnii would have drained entirely away and that the foetus would have remained in the firm embrace of the contracted uterus, with ineffective attempts at expulsion.

The foetus was a full-term male and as far as outward inspection went complete, with the exception notified. On birth it lived for a few minutes—the eyes moving and rolling, muscular movements passing over the body and limbs. Subsequently rigor mortis was well marked, and the length of the child was over 17 inches. The mother said that she had been frightened about the supposed time of her conception but I do not consider that this had anything to do with what is here described. The subsequent course of her recovery was uneventful.

Guildford.

SOME CASES OF BONE CAVITIES TREATED BY STOPPING WITH PARAFFIN.

By ALBERT J. WALTON, F.R.C.S. ENG., L.R.C.P. LOND.,
B.Sc.,

ASSISTANT DIRECTOR, PATHOLOGICAL INSTITUTE; LATE HOUSE SURGEON,
LONDON HOSPITAL; LATE SENIOR HOUSE SURGEON AND REGISTRAR,
SCHOOL OF TROPICAL MEDICINE, ROYAL ALBERT DOCKS.

Up to a few years ago the treatment of chronic abscess of bone and chronic osteomyelitis was in a very unsatisfactory state; the condition was treated by palliative means for as long as possible, during which time the cavity increased in size until it reached the surface. It was then opened, scraped, plugged with gauze, and gradually filled from below. Now, as the newly-formed granulation tissue had to be converted in sequence into fibrous tissue, osteoid tissue, and finally true bone this process took a long time to complete, a cavity of the size of a hen's egg usually remaining open for about four months and then resulting in a scar, which was depressed and adherent to the underlying bone and very liable to break down. To overcome the long convalescent period many attempts have been made to fill the bone cavity with various substances, the wound is then sewn up, and

having healed by primary union the substance in the cavity is gradually absorbed and replaced by bone, but as the wound is quite healed the patient is able to go about his usual work and is independent of the changes going on in the bone beneath the surface.

In the evolution of the present methods the following materials have been used as stopping:—1. Blood clot. This did well for small cavities provided they were made perfectly aseptic but in larger spaces it is liable to break down. 2. Strands of catgut were placed in the cavity in the hope that the blood would clot more firmly around them. This was not found in practice adequately to fulfil its object. 3. Pieces of sterilised sponge. These were not absorbed and hence did not carry out the main object of their use. 4. Pieces of decalcified bone. With these the crevices could not be filled, which seems to be one of the essentials of success, and in the majority of cases their use was followed by failure. 5. Plaster-of-Paris. This could be well sterilised, but it took a long time to set firm, was not absorbed at all, and in most cases led to such irritation that it was ultimately discharged, leaving the cavity to be filled up from below, with the presence of an open wound. 6. The method introduced by Mikulicz of filling up the cavity with a mixture of iodoform and paraffin. This, with modifications, is the method now generally in use. Moorhof uses a mixture of iodoform, 60 parts, spermaceti and oil of sesame of each 40 parts, this mixture being chosen, first, because of its antiseptic properties, and secondly, because it is said to be more easily absorbed than paraffin. In 1905 he had recorded 195 cases of different sorts without a single failure. Cases treated in a similar manner have been recorded in this country by Seymour Jones and Corner.¹ The cavity is scraped out, sterilised, and dried carefully so that the mixture may come into contact with every part of the wall; it is then filled with the mixture and after this has set firm the soft parts are sewn over it.

In the first of the three following cases such a method was tried but without success. On considering this case and several others of similar failure attempted by various surgeons it appeared to me that certain modifications might be applied which would decrease the likelihood of failure, and on putting them into practice, as in the last two cases, I found the method was completely successful. The notes of the cases are as follows.

CASE 1.—The patient, a youth aged 18 years, was admitted to the London Hospital on May 6th, 1907. Six months before admission an abscess had formed in the right ankle. One month later the abscess was opened at an infirmary where he had been since with sinuses still discharging. He was then sent to the London Hospital for further treatment. On admission there was a sinus one inch above the right external malleolus, which ran in for one inch leading to the bare end of the tibia; over the lower end of the anterior surface of the right tibia was a scar three inches long, with a sinus at the upper end leading to bare bone. The tibia was much thickened beneath the scar; two inches above its upper extremity was another sinus leading to bare bone. A radiograph showed much thickening, with irregular formation of new bone around the lower end of the tibia; in the centre of this could be seen a sequestrum about two inches in length with an irregular outline.

At the operation an incision was made over the scar and the outer wall of the involucrum was removed; the sequestrum was loosened by chiselling and removed; the sinuses were scraped and the cavity was plugged with sterile gauze strips. The wound was replugged daily until the tenth day. On this day an anæsthetic was readministered, the cavity was scraped out, and the bleeding was stopped as far as possible with pressure by gauze plugging. The periosteum was reflected but was found to be very thick, cartilaginous, and inelastic, so that it could not be drawn across the cavity. Attempts were then made to dry the cavity with a modification of Moorhof's apparatus, air being passed through tubes containing formalin and calcium chloride to dry the air. It was, however, found impossible to get the walls perfectly dry. The cavity was then filled with Moorhof's mixture, this being poured in at a temperature of 114° F., at which it is a liquid. It did not harden well or quickly in the cavity. The periosteum was sewn across with Pagenstecher thread as far as possible and the skin was united with silkworm gut. On the day after the operation the patient's temperature rose to 102° and a bright

¹ St. Thomas's Hospital Reports, vol. xxxii., p. 433.