REPORT OF A CASE OF TALIPES EQUINO VARUS.

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W. D., a typical Kentucky lad of fourteen years of age, consulted me on Sept. 1, 1891, having suffered from time of birth with talipes equino varus in a most aggravated form.

The foot was turned straight backward, so that the weight of the body came directly upon the astragalus. This state of affairs necessarily caused the plantar surface of the foot to be thrown upward to such a degree that the under surface of the toes was the only part that touched the ground while standing erect.

The left foot, he said, was at the time of birth, as greatly deformed as the right, but by rubbing and manipulating it by those having him in charge, cured it.

I found upon examining the left foot that the ankle joint would allow of more motion in all directions than a normal joint should admit, thus proving to my mind that there had, at one time, been some deformity of the left foot.

However, this boy was able, with an ordinary pair of shoes, to romp and climb the hills as fast and easily as could his ordinary companions. With this ability to enter into the sports, he had the sense of pride which is possessed by all Kentuckians, and was willing to undergo almost any amount of suffering to have the deformity corrected.

I advised an operation, and after some explanation obtained the boy's consent to operate. Chloroform was used as the anæsthetic, and the operation was made on Sept. 2, 1891, at 10 o'clock A.M., in the following manner:

A Barton's bandage was applied to make the operation a bloodless one. An incision was made upon the external aspect of the instep, about two inches in length, extending from the lower end of the fibula in the direction of the lower end of the tibia, which brought me upon the ligaments and tendons connected with the joint.

I did not divide any of these tissues, merely crowding them aside so that they could not be injured in the process of extracting the bone, which I thought would be difficult.

The astragalus was found to be hard and much deformed, so that its outlines were very indistinct. However, there was but little difficulty experienced in dividing the bone, it being found impossible to extract it without dividing the ligamentous tissues and extending the cutaneous incision, both being steps which I wished to strenuously avoid. After removing the bone, I endeavored to bring the toes forward, which, however, was not very successful, as the tendon Achilles was almost obliterated, the little remaining being very dense. I found it necessary to divide all of the tissues posteriorly before the first could be brought forward in a normal position. When the foot was put in this position, the plantar fascia was found much contracted, so much so that I divided it completely. The normal position was maintained with straps passed under the foot in close proximity with the toes, and made fast to hooks woven in a plaster extending from the middle of the

thigh to below the knee. This proved to be a great error, as the pressure was so great from the tendency of the toes to turn backward, that a slough ensued, which complicated matters very much.

At the end of the fourth day the strap was removed, its damage not having been detected before this time. The operation was made under hot filtered water irrigation, and the dressing of the same character.

The patient recovered from the effects of the anæsthetic, but suffered a great deal. Although drainage was not provided for in this case, I would not fail to use it in another. Every time I have failed to make this provision regret has followed. It was found necessary to open an abscess on the top of the foot, under the hard callous, which had been formed by walking on it, which was at one time the sole of the foot.

Peroxide of hydrogen and water irrigation were extensively used, and the temperature remained less than one hundred after the tenth day, it previously having reached on one occasion one hundred and four. His recovery was now uninterrupted, the foot keeping its normal position without support. He was on crutches at the end of the fourth week, and left the hospital at the end of the tenth week, with but a small sinus which has since healed, as stated in a recent letter from him. A shoe is worn, and he now goes about without the use of crutches. I have not learned of one so old as this lad being operated on in this manner (removal of the Astragalus).

In my mind it is the most desirable operation to make in a certain class of talipes, that class including those cases where tenotomies give but little promise. The slope of the foot is preserved; the joint more useful, with comparatively no more danger.

The tibia is made to rest on the os calcis by the removal of the bone, the shape of which has been changed to such a degree that it will never allow the sole of the foot to rest evenly upon a plane.

AMPUTATION OF SCROTUM AND CIRCUMCISION.

(Referred to me by Dr. Garner, of St. Joseph, Mo., August 9, 1890.)

Mr. F. P., æt. 22 years, white, United States, active mind and in fair physical condition. Height 5 ft. 8 in., weight 130 lbs., brown eyes and dark brown hair, and of a nervous temperament.

He was free from syphilis, and with no predisposition to tuberculosis. Drinks tea and coffee, occasionally indulging in a glass of beer or wine, and is an inveterate cigarette smoker.

He stated that he had consulted nearly all the leading surgeons and dermatologists of this country without obtaining a diagnosis, or any encouragement in operative interference.

I found upon examination that the scrotum was thickened and about six times its usual size, as was also the prepuce, the latter not having been retracted for years.

Papillomatous growths, varying in size from the head of a pin to a large pear, studded the surface of both the penis and scrotum. There were also many small angioma.

This thickened papillomatous and angiomatous condition existed on the skin of the right leg from the apex of Scarpa's triangle to the toes, gradually becoming more extensive as the foot was approached. The greatest trouble, however, was between the upper third of the leg and the ankle.

Upon removing the bandage, which had been used constantly for years, and which was necessarily made tight, the entire leg would immediately begin to swell, and continue to do so until it would become twice its normal size, having a tense glistening appearance, accompanied by considerable pain and discomfort.

If the cuticle was abraded, lymph would flow continuously until from 5 to 30 ozs. would have escaped. This was also the case if a papillomatous growth was broken, or the skin punctured with a needle. This exudation was very annoying, as it would occur on the slightest provocation and could not be controlled, ceasing only of its own accord. The lymph was the color and consistency of thin cream, slightly tinged here and there with blood. It was bitter, and crystallized on evaporation.

When 18 months of age an abscess formed in the right groin, which was freely incised by the attending physician. From this dated the trouble in the leg, scrotum and penis.

The patient would have three or four severe chills during each year, followed by a temperature ranging from 103° to 104.5°. Delirium would accompany the chill and fever for from twenty-four to forty-eight hours.

It was found upon close inspection that the leg was larger and more uncomfortable just preceding one of these attacks. The quantity of urine voided during the time would be less for the first twenty-four hours, but would then flow in abundance. The appetite was poor, the skin clammy and of a light copper hue, the eyes glassy, and his mind dull and inactive; bowels constipated, with great tenderness in and about the right iliac fossa. There were also extensively enlarged glands in this region.

Under the circumstances, I advised complete circumcision and scrototomy at the same time, explaining how it might be possible to have a great loss of lymph from the severed integument. However, consent was given to remove the prepuce. If this did not cause trouble, he would allow me to amputate the scrotum later on.

Circumcision.—Within a few days he presented himself for operation, which was made painless with cocaine. An incision was made upon the dorsum, after which the lateral incisions were made, thus baring the gland entirely. There was no blood or flow of lymph whatever to complicate matters, and the patient made a rapid recovery, being on his feet constantly after the first three days. Numerous small papillomata were found distributed over the surface of the gland, many of which were of a pearly white, while others were reddened, giving the appearance of angioma.

His anxiety was now relieved and the irritable condition of the gland and prepuce at an end, all of which gave him courage to undergo the more severe operation. He gained five or six pounds during the following two months, at the end of which he decided to have the scrotum amputated. This was done in November, 1890, in my private hospital, in the following manner:

After applying a King clamp, one-third of the scrotum was removed and the edges brought together in the usual way. It was found that the vascular supply was much greater than in a normal scrotum; some of the vessels being twice, while others were three times their natural size. In consequence thereof considerable hæmorrhage ensued.

It was found, however, that the exudation of serum was slight and of but little importance, while the principal bleeding point was obstinate.

The patient rallied nicely from the anæsthetic, chloroform, and complained but little until about 11 P.M., when he suffered considerable pain. There was constant oozing from the wound, with extensive swelling of the entire scrotum. This led me to suspect concealed hæmorrhage about 3 A.M., when I cut the stitches to find the scrotum distended with blood clots. There was also arterial hæmorrhage, evidently from the same point as at the time of the operation, at 10 o'clock of the preceding A.M.

The cavity was evacuated and exposed to the air, when the hæmorrhage ceased. The stitches were again adjusted and the wound dressed with dry boracic acid. He remained in the house for one week, at the end of which time he left for his home. Part of the wound healed by granulation.

During the following year he had but two or three chills followed by fever. He gained flesh, felt more comfortable, appetite better, slept better and felt entirely satisfied with the result.

The operations were not with the view of curing the patient—merely to relieve. I feel assured that the end justified the means.

I believe I was wholly responsible for this accident, in that had I been more careful in torsioning this artery, the unpleasant hæmorrhage would not have occurred.

NEURECTOMY OF THE POPLITEAL SCIATIC NERVE FOR PAINFUL NEUROMA AS THE RESULT OF GUNSHOT INJURY.

M., æt. 27 years, a tinner by occupation, consulted me on August 14, 1891, stating that he had been shot two years previously through the leg, and that he had suffered excruciatingly ever since. He also stated that by the advice of the attending physician he had become addicted to the habit of taking morphine hypodermically until he had reached the daily maximum quantity of fifteen grains. This statement was easily verified by the innumerable pigmented points upon the legs where the hypodermic had been inserted.

Upon examination I found that the ball (38 calibre) had passed obliquely through the left leg, entering on the inner side three or four inches above the condyle, anterior to the ham string of the biceps, passing upwards at an angle of 45°, making its exit externally about the middle of the thigh.

At the time the revolver fell from the counter and exploded (for this was the way the accident occurred) he was standing erect. Immediately upon hearing the report he felt a severe pain in the toes of the injured leg. Thinking that he was shot in the foot, he had his shoe removed, but could not find anything to indicate such a state of affairs. He did, however, find a stream of blood flowing down the leg, indicating that the injury was higher up the member, and which led him to the exact point of entrance of the ball. The pain within an hour or so became equally distributed over the foot and that portion of the leg below the injury.

As pain is the thing for which the physician is most consulted, he went from one to another, trying every remedy that might be suggested, without relief; hence, the advice given by the physician in a fit of desperation, to relieve himself of the responsi-

bility of caring for such a patient. He would take an injection wherever he might be, when the pain came on; whether it was on the house-top or in the shop. I saw two of these doses taken, satisfying me that each contained five grains.

Operation.—Aug. 20, 1892. Leg shaved and cleaned as well as possible, chloroform administered and rubber bandage applied from toes upward. An incision four inches in length was made in the median line posteriorly, encroaching upon the popliteal space. The skin being divided, I tore my way through the tissue at once, exposing the nerve, which was three times its natural size, for a distance of one and one-half inches. Upon examination I found that the nerve divided much higher up in this case than any I had ever seen, fortunately for if it had not been both branches would have been divided. I found that the external branch was the uninjured one, and that it was adherent to the internal one for a distance of three inches. A section one and three-fourths inches long was excised, which included the entire enlargement. Before dividing the nerve, a silk thread was passed through it, on either side of the enlargement, so that the ends could be brought together by flexing the leg at right angle. The leg once flexed, the ends were coapted and a silk suture applied on each side of the central artery, that it might not be injured. I then passed another silk suture through each stump, one inch from their ends and tied them, so that too much tension would not be brought on the two smaller ones—distributing the tension. The external branch being much slackened by the flexion was left to care for itself. A drainage tube was placed in the wound and silk suture used to close it.

The leg was kept flexed by a strap about the ankle, attached to a band about the body. Upon rallying from the operation the patient complained of pain, the character of which was similar to that before the operation, so that it was necessary to give one-half grain of codeia at 7 P.M. and 9 P.M. following the operation. The use of morphine was forbidden and the use of bromide and chloral resorted to.

The temperature reached one hundred on two different occasions and remained about ninety-nine during the course of recovery. The Faradic current was used with great benefit at various intervals. The drainage tube was removed on the third day and the cutaneous stitches on the fifth day, at which time there was a slight discharge which continued for about fifteen days.

On the twelfth day the leg was let out five or six inches and the patient allowed to sit up. The pain was more severe while the patient was lying upon his back than while sitting up or around on crutches.

He was allowed to be up and about on his crutches every day after the twelfth day. The pain gradually disappeared, and he was allowed to leave "The Trinidad" on Sept. 10, 1892, having been in the hospital twenty-two days.

I heard from him recently, and find that he is free from pain and the morphine habit.

Dr. Ridlon of Chicago, believed that there are certain cases of congenital club-foot that cannot be cured without excision of the astragalus, though some claim that all cases can be cured by stretching and dressing, and others that all can be cured by tenotomy. He had a case in which different dressings were carefully applied with an unsatisfactory result; then tenotomy was done and the foot dressed with plaster of Paris and still the case relapsed, then the open operation of Philipps was done, and even then, after wearing carefully adapted apparatus, it relapsed. Finally the astrag-

alus was removed and it was found to be wedge-shaped posteriorly, which accounted for the difficulty in keeping it in position. The result was perfectly satisfactory.

Dr. Sayre, of New York, said that he would not go so far as to say that all cases of club-foot could be cured without removal of the astragalus, but he had never seen one which required it. Even if we have this distorted condition of the astragalus we must remember that at first these bones are soft and malleable, and if the foot is put in correct position the bone will be moulded. He could conceive of cases, where there was absence of different parts of the foot, where removal of parts of bone might be necessary to correct deformity, but in congenital cases treated from the outset, he was of the opinion that no bone operation was required. He had not yet met with an advanced case, that required bone cutting operations, and he had seen cases in persons from 26 to 46 years of age, which had been without treatment since childhood. Complete section of the ligaments and all holding soft tissues was sufficient if combined with great force in putting the foot into normal position. The reason why so many cases relapse is because they have never been cured. No case should be considered cured until it can be retained in position without apparatus. Something may be said for operation if the patient cannot afford the time for the slower treatment.

WHAT IS THE RELATIVE INTERDEPENDENCE OF ORGANS OF THE BODY IN HEALTH AND DISEASE?

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In presenting my thoughts on this subject I am moved with a desire to express to you those things which we have all seen in our professional experience. From those observations we may piece out our conclusions—examine them, and approve or decline their acceptance. By such processes do our minds make progress along the way of truth. The conclusions in the complex problems of medicine are oftener determined by the point from which we start. In giving my thoughts on this subject I may say further that I have no expectation of presenting any new principles but old established ones in a relation from which we may hope to draw profitable conclusions.

The problems regarding disease are so obscure and involve so many and such varying factors that their solution has baffled the skill of wise men of all ages—and as yet, though we have to deal with natural phenomena which present uniformity, except in varying conditions, we have not rested our inquiries upon any absolute principles, from which we can reason with unanimity in the interpretation of facts. Medicine is called an uncertain science, and we confess with some show of truth which result often in most unsatisfactory empiricism in the art. In this we find the varied and conflicting theories of pathology, and also conflicting methods in the art, so that the problem before us is to establish some principles on which we can rest, and art that shall be established so as to require the one practicing it to consider the differences in each case, and apply such remedial means as shall appear reasonable because referable to some accepted principle. It is some such reflections as these that the question of the relative interdependence of organs in health and disease, presents itself for solution. To this inquiry I respectfully solicit mutual attention. We recognize the mechanism of the body as complex; with each part dependent upon another, so that the whole can attain its typical structure and function, only when the