

mist, or giddiness having been felt; and in place of the eager longing for release usually experienced, it seemed to me that I could have sat on without effort.

As Helmholtz clearly puts it, "to look at anything means to place the eye in such a position that the image of the object falls on the small region of perfectly clear vision. This we may call *direct* vision, applying the term *indirect* to that exercised with the lateral parts of the retina—indeed, with all except the yellow spot." The mistiness which occurs when the gaze is long fixed in one direction appears to come up from the periphery of the field of vision. This means probably that the fatigue of the nervous element is shown first in those portions of the retina which are least highly developed, and where vision is indirect. These parts in the ordinary method of procedure are subjected to a constant strain for a period which frequently amounts to sixty or seventy seconds. By the plan which I adopted, each movement of the eye which brought a new clock-figure upon the yellow spot necessarily shifted also the position of all surrounding objects in relation to the rest of the retina, fresh points of the nervous layer being thus presented to the action of luminous rays every three or four seconds. Hence fatigue of the nervous element never had time to occur. On the other hand, the rotatory movement of the eyeball in adapting itself, step by step, to the figures upon so small a circle at such a distance was so excessively fine as to cause no interference with the photographic process. Mr. Fradelle, who has since applied the suggestion in many other cases, writes me that "the eyes are excellently well-defined, even to the iris; not alone yours, but all the pictures I have taken since have a marked superiority over those I had previously taken in the manner in which the details of the eyes are reproduced. In my opinion, the success of your idea is unqualified. I have questioned my sitters after the operation, and they express themselves as not having had any strain upon their eyes."

It is evident that the plan described is likely, incidentally, to prevent to a great extent the staring expression which the face assumes when the gaze is long fixed upon an object, for it combines a certain amount of free play of the eyes, with accuracy of photographic definition. A somewhat larger circle, I have no doubt, may be employed with even greater advantage; and printed words, pictures, or other objects, may replace the figures. For children, and others who do not easily follow directions, a disc with a single aperture towards its edge might be made to revolve, in the direction of the hands of a clock, before another disc prepared with pictured objects of some kind or other, so that one would appear at a time at short intervals of space, and attract the eye. Various other modifications, indeed, at once suggest themselves as feasible, so long always as the figure towards which the gaze is directed presents a *succession* of objects arranged in a circular form.

Grosvenor-street.

## A CASE OF TALIPES EQUINO-VARUS CURED THROUGH AN ACCIDENT.

WITH REMARKS AND SUGGESTIONS.

BY JOHN McDONALD, M.B.

J. D. McD—, male, aged eleven years, was born with talipes equino-varus of both feet. His parents were willing that he should submit to an operation, but from being in a very inaccessible and remote part of the country, time passed and no steps were taken. He was always a healthy child, but did not commence walking until he was eighteen months old. When standing, the outer side of his feet rested on the ground, the soles being turned backwards, the toes pointed towards the middle line, and the heels drawn upwards. When walking, the one foot was lifted over the other in a rotatory manner.

When between the ages of four and five years, he happened one day to tread upon a small nail, which entered his left foot, just at the place where the pressure was greatest when he stood. In consequence he could not walk on the injured side of the foot, but being healthy, and active, and restless, as children generally are, he constantly endeavoured to move about, but with all his endeavours was unable to do more

than reach the ground with the tips of his toes; his restlessness and desire for exercise prevented the wound from healing as rapidly as it might otherwise have done. He all this time walked on the tip-toes of the injured foot, and by the time the wound had closed the foot was so much improved that he never afterwards walked on the outside of it, as formerly, and in less than a year the deformity had nearly altogether disappeared. His parents, being persuaded that the other foot could be cured in the same manner, got him (now nearly six years of age) by promises, &c., to put the sole of his right foot to the ground. This was not an easy task for him, but being by this time aware that his foot was not like the feet of other people, he took a pride in showing that he could put his toes on the ground. This foot also improved gradually, although it took a much longer time to get better than the other. At present both feet are quite free from the deformity, except that the right tendo Achillis is still perceptibly shorter than it should be normally. I may mention that his feet are a little shorter than one would expect, and consequently look broad at the toes.

*Remarks.*—The above case is interesting from the fact that the cure was brought about by an accident, and not by good management or scientific treatment. While walking on tiptoe the shortened tendons and fasciæ were stretched by the weight of his body at each alternate step he made. The opposite group of tendons &c. might be looked upon as being all the time at rest, because the shortened group gained in length so much by each day's exercise that they had no purchase on the already too long tendons, and consequently the latter were never called into action.

That the wounded foot took so much less time than the other to get better shows clearly that no delay should be made in attending to the deformity; for the lower the organisation of the contracted fibrous tissues the easier they may be lengthened by stretching.

*Suggestions.*—The accoucheur should take charge of such a case from the birth. He should at once insist upon getting an intelligent nurse who could take care of the child until the mother might be able to look after it. He should explain the cause of the deformity, and show the nurse how to direct gentle pressure with the hand to put the contracted tendons &c. on the stretch. The nurse should change the child from hand to hand every quarter of an hour; by so doing each foot is acted upon in turn, and she eases her own hands. During the night spring boots, specially made for such cases and of the lightest description, should be used. The accoucheur should see that the nurse can put on the boots to his satisfaction. These points should be followed out faithfully for six months, and by that time the medical attendant would be in a position to say whether or not an operation would be necessary.

The advantages of such a mode of treatment over the subcutaneous section of tendons may be laid down as follows: (1) It may be given a fair trial before the time that operations are usually performed. (2) There is no risk of weakening the foot as there would be in cutting the tendons, for if the foot be not kept at rest for months after the operation all the tendons would be too long, and the foot would have too great a play at the ankle-joint. (3) The child is not likely to fret, so much treatment being begun so soon after birth. (4) The cure would probably not be more tedious than a cure after an operation at the age of six months. (5) Many parents, some from their religious views, others from a dislike to an operation, might object to surgical interference, but would gladly avail themselves of this mode of treatment. (6) This treatment having had a fair trial, and having been found unsuccessful, an operation could be performed at the usual time.

The operation is anything but severe in itself, but I have seen mismanagement with the boots cause troublesome ulcers at the seats of puncture, and I know a case where too much faith was put in the operation to the neglect of the after-treatment resulting in doing the patient no good. I am convinced that an operation will only be required in a small percentage of cases in which early and prompt attention is paid to the deformity.

Skye, N.B.

*PRESENTATION.*—Mr. Thomas Johnston, M.R.C.S., of Belper, has been the recipient of a very gratifying testimonial from the inhabitants of the town and neighbourhood. At a large and influential meeting of the local residents, a handsome brougham was presented to Mr. Johnston as an evidence of the esteem in which he is held by them.