MEASUREMENTS IN SPINAL CURVATURE.¹

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CASES of lateral curvature present so many complicated and varied conditions, and the changes are so discouragingly slow in many instances, that accurate measurements are of great importance for showing the progress of the disease and the effect of treatment.

For a complete record the spinous processes from the seventh cervical down to the sacrum should be spotted with a black flesh pencil, also the posterior-iliac spines. The simplest way to get the record is to photograph the patient thus prepared immediately behind a screen, consisting of a rectangular frame with threads strung vertically and horizontally, cutting the entire surface into inch squares. The photographic outfit is inexpensive and the whole process is extremely easy in a well-lighted room. This gives a photograph of any aspect of the individual, with the means of measuring with comparative exactness any detail that is desired. Taking the straight line joining the seventh cervical vertebra and the mid-point of the sacrum (cervico-sacral line) as a convenient basis, we can measure the length of this line, its inclination to the vertical, the points at which it crosses the line of spinous processes, the levels of points of greatest deviation of the line of spinous processes, the extent of such deviation, and the distances to the sides of the trunk at different levels. By means of the horizontal threads of the screen the height of the shoulders may be determined, the level of the pelvis, etc. Successive photographs can be taken for comparison, and of course must be taken under as nearly the same conditions as possible.

The advantage of the photographic method of recording lies especially in the following particulars: the entire set of conditions is obtained at one instant, so their relations to each other have not become deranged by movement, the patient has not been made self-conscious by overmuch handling and stands in an unprejudiced position.

It is important also to measure the amount of rotation of the spine. This can be done indirectly by measuring the amount of antero-posterior deviation of the ribs on the two sides. The most convenient method for doing this is to take the shape of the back by moulding a strip of lead to it and transferring this to pasteboard by means of a pencil. This pattern cut out forms a gauge which may be applied to the back and corrected until it fits perfectly, when it serves as a permanent index to change in rotation. It is possible to get the entire contour of the chest by having a strip of lead long enough to encircle the chest, cut in two and a small brass hinge inserted. The strip is then moulded around the chest and the hinge permits it to be opened and then re-closed on the sheet of paper for drawing the outline. Measurements should be taken under the same conditions as at first. It is best in many instances to take measurements both standing and lying, or in suspension, for determining the degree of correction possible.

Measurements of strength may be taken, also of weight, height, amount of chest expansion in extreme inspiration and expiration, of flexibility of the spine, forward and backward bending and sidewise bending, right and left. Measurements should be made every

six months, or more frequently in rapidly changing cases. It should be borne in mind that many of the conditions involved in spinal curvature are vague, and that careful measurements which will form the basis for statistical study of the subject are of great value.

NEPHRITIS IN INFANTILE SCURVY.¹

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MOST of the writers upon infantile scurvy speak of the occasional occurrence of hemorrhages into the internal organs, and among them into the kidneys, and of the presence of albumin in the urine at times.

For example, Barlow says that the urine often contains a trace of albumin, and a little blood, that it is sometimes scanty in amount, and coarse concretions of uric acid may be passed. He then calls attention to the statements of Dr. Gee, and Dr. John Thompson that hematuria may be the only sign of this disease in children, and adds that Sir William Roberts has said that he has observed cases of this scorbutic hematuria, without other symptoms, responding to antiscorbutic diet. Barlow then speaks of two similar cases of his own, one responding to antiscorbutic treatment, and another of which he lost sight.

Fruitnight says simply that hematuria has been observed. Carr says that the urine often contains albumin, and at times blood is passed, and then says that it is probable that a greater number of cases would show kidney changes if it were possible to examine the urine during the acute stage. Fox says merely that the urine in this disease is "often very thick," but reports a case, with an examination of the urine, to which we shall return. Fürst says that the kidneys sometimes show extravasations of blood into the pyramids, and says of the hematuria, that it has been observed by Shoppee, Gee, de Bruin, and Conitzer. He states that the hematuria is not always so marked that one can recognize it macroscopically. The urine is apparently clear, and free from blood, but in the sediment red and white blood-corpuscles are found, as well as blood-casts. Von Starck found an excess of urobilin. Fürst also says that Cheadle, Heubner and Conitzer have found albumin present, and de Bruin renal epithelium and granular casts.

Northrup, in Starr's "Text-Book of the Diseases of Children," says only that hematuria may occur.

The autopsies in the disease which we are considering are not very numerous, and only in a part of them is the condition of the kidneys noted. Taylor reports a case with autopsy. He says that there were no hemorrhages into the kidney. There was apparently no microscopical examination of the kidneys made, nor was the result of any examination of the urine given. Barlow reports three autopsies. In the first one, a case of Smith, the abdominal organs were normal, but the urine had not been obtained. In the second case, no disease of the kidneys was noted. In the third, the kidneys were stated to be normal. Fürst also reports a case with autopsy. The examination of the urine is not mentioned. At the autopsy the kidneys were normal. In all, we have five autopsies where the kidneys were found normal, at least

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