bladder, after having used the catheter, with a solution of ⅓ to ½ grain of acetate of lead to the ounce of water, or 1 to 3 drops of dilute hydrochloric acid to the same quantity. It is best done by putting the solution into a 4 oz. rubber bottle with stop-cock and injecting half the contents. This is then allowed to run away, when the balance of the fluid in the bottle should be thrown into the bladder and allowed to remain.

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## A FORM OF INJURY TO THE ELBOW-JOINT IN CHILDREN.

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[Read at a Meeting of the Toronto Medical Society.]

THE obscurity which so frequently attends injuries to the elbow-joint in young children, renders of considerable value any actual advance in our methods of diagnosis and treatment of these injuries, which, owing to the complexity of the joint, especially in very young patients, cause them to be associated not unfrequently with subsequent impairment of the functions of the joint.

It would appear that such an advance has been attained through the experiments and clinical demonstrations of Jonathan Hutchinson, jr., as set forth in a paper in the *Annals of Surgery* for August, 1885.

This paper is entitled "On Certain Obscure Sprains of the Elbow Occurring in Young Children," in which is described for the first time a form of injury, apparently of frequent occurrence, especially among badly nourished, so-called "strumous" children.

The following two cases are reported, simply from the fact that they apparently constitute typical examples of this injury, the essential lesion of which consists in a slipping upwards of the orbicular ligament, allowing the radial head to escape from its grasp, and producing a very slight forward displacement—so slight, indeed, as hardly to constitute a dislocation, the radius remaining in contact with the capitellum by the border of its cup.

The leading points in the etiology, diagnosis and treatment, as given by Hutchinson, are briefly as follows :—

"The accident occurs only in young children, the great majority of the patients being under six years, and is due in nearly all cases to forcible traction upon the hand while in a condition of supination; the resulting loss of power over the joint is immediate, and is usually accompanied by more or less severe pain; the most careful examination reveals very slight, almost imperceptible, deformity; all attempts at manipulation apparently give rise to severe pain, the position which seems to be the easiest being that midway between pronation and supination. The treatment consists in first flexing the forearm, and then pronating the hand upon which the ligament slips down, and the head of the radius impinges on the capitellum with a distinct thud or click."

That this line of treatment is based upon sound anatomical indications, it will be sufficient to examine the head of the radius and its relation to the orbicular ligament.

Complete supination brings a deeper portion of the radial head in contact with the outer curve of the ligament, this portion of the head forming a sharp rectangular edge, which would still further increase the difficulty of reduction, while by pronating the hand a rounded and much shallower surface is opposed to the ligament. It would therefore become evident that by pronation we obtain the most favorable anatomical condition for the readjustment of the parts, and hence the proper method of treatment.

The first case occurred in a strong, healthy little girl *aet.* five years, who, while walking beside her mother, who held her left hand, slipped, and while in the act of falling was forcibly jerked by the mother; the child immediately cried out, complaining of pain about the elbow. When seen two hours later she was still crying, and apparently suffering severe pain. The limb was held in a position midway between supination and pronation, the left hand being supported by the right.

Examination under chloroform revealed slight swelling about the joint, especially anteriorly, along the upper fourth of the forearm. Rotation of the head of the radius could be readily detected, but it appeared also to possess a slight, but distinct, antero-posterior mobility; extension not materialy impaired, flexion distinctly so.