observed by the patient, parent, or attending physicians as follows: "For three months in 5 cases; seven months in 3 cases; eight months in 4 cases; ten months in 6 cases; one year in 4 cases; two years in 2 cases.

In 5 cases re-accumulation occurred, and subsequent evacuation was required. In 3 of these there has been no re-accumulation, although several months have elapsed. In 1 case a persistent sinus exists. In 1 case infection took place from a stitch-wound abscess, when catgut sutures were employed. In 14 cases more than one year had elapsed, and in 11 of this number the original cicatrices have remained firm and unbroken; 3 were re-opened for re-accumulation, and the second cicatrices have not yielded six months after the second operations. In 10 cases, less than a year has elapsed since the operation, of which number 9 have remained closed, and in 1 a persistent sinus is now present. In 16 cases the bone origin was not found. In 3 it was found to be of an extensive character, involving the head of the femur and acetabulum. In 3 cases the deposits were found to exist in the femur, and were of small size. In 2 cases the site was found in the rim of the acetabulum and quite small in extent. In addition to the above there were a number of suppurating cases upon which I did not consider operation advisable. Some of them were upon the point of spontaneous rupture, the overlying skin was thin, very tense, and the abscesses of large size. In other cases recourse was had to mechanical fixation without operation. In contrast to the distressing persistent sinuses that have so frequently followed attempts to avoid the radical procedure here described, I have felt that in future I should be inclined to extend the range of cases upon which I would consider the operation advisable.

I have frequently observed spontaneous resolution without rupture of an abscess of considerable size, and have seen many cases where the spontaneous closure of a long-standing sinus has occurred after a prolonged period of time; but these were under the most favorable circumstances, and I can but doubt that they would have obtained a more speedy cure if these abscess-accumulations had not been left so largely to themselves. Upon the other hand, the presence of persistent and often multiple sinuses is of entirely too frequent occurrence, and would tend to favor the employment of measures that, while apparently of a serious nature, certainly offer prospects of the avoidance of sinuses—relief from which can often be obtained only by recourse to operative procedures very similar to that employed in their prevention. The unsatisfactory results obtained in the treatment of hip abscess may be traced to—

a, delayed operation;

b, imperfect measures of operating;

c, squeezing the abscess to evacuate the contents;

d, the employment of the drainage-tube;

e, and most important of all, the failure to employ prolonged and absolute fixation of the hip-joint.

(*a*) In delayed recourse to operative procedures the extensive destruction of bone tissue prevents the closure of an abscess cavity by a constantly renewing accumulation. (*b*) The imperfect operative measures are those which remove but a part of the sac contents or wall, or where the cavity to be closed is too large to permit a thorough cleansing of the parts, or where the cavity about to be closed is filled with some fluid which, in escaping through the incision, tends toward the production of a sinus. (*c*) In squeezing the parts surrounding an abscess to assist in more rapid evacuation, the already inflamed tissues are bruised, and upon this point I can cordially endorse every word that Phelps* said when discussing this same subject in 1889. He deprecates the squeezing out of the pus, and says that "if the abscess is properly opened at first there will be no necessity for doing this." (*d*) With reference to the employment of the drainage-tube, I cannot agree with Dr. DeForest Willard† with reference to the necessity for its use. Dr. Willard advocated gradual withdrawal of the rubber drainage-tube, believing that it assisted in effecting a thorough cure, and that this was of far more importance than obtaining primary skin union. My own experience is that the employment of the drainage-tube is invariably followed by a sinus which but rarely closes spontaneously. R. W. Lovett, in his classic prize essay, entitled "The Etiology, Pathology, and

*Transactions of American Orthopedic Association, Vol. ii., p. 92.

†Ibid., p. 146.