

and through which the cyst itself is subjected to injury.

The sac of a spinal abscess, formed as it is of a firm membrane, known as the pyogenic membrane, and the surrounding stretched and altered tissues through which the pus has travelled in its efforts to reach the surface, differs from that of a superficial chronic abscess, in that its sides do not contract and approximate after its evacuation. As a result of the tension of its vessels, due partly to the compression exerted upon them by the accumulated pus, and partly to the infiltrated condition of its walls, its blood supply is comparatively slight, and the formation of pus is a slow process. From the very moment, however, that the circulation and nutrition of the cyst are disturbed by the withdrawal of its contents, from that moment the tension of the vessels is lost, and, as natural consequences, more blood is sent to the heretofore slightly vascular membrane, its surface becomes studded with minute granulations through the dilatations of the old capillaries and the development of new ones, and pyogenesis goes on at a greatly increased rate. So rapid, indeed, is the production of pus that a day or two suffices to cause the abscess to attain dimensions which, in its closed state, was the work of months. After several evacuations, it is, moreover, a matter of repeated observation that the pus is not only thin and somewhat putrid, but that it is more or less streaked with blood, the latter phenomenon being readily explicable by the rupture of the softened capillaries from the insult to which they have subjected by the alternate relaxation and distension of the pyogenic membrane during the discharge or accumulation of the contents of the abscess.

In illustration of the changes which ensue in the limiting sac, I show you a water-coloured drawing of a psoas abscess that had undergone spontaneous evacuation after several subcutaneous punctures. Instead of a smooth, almost bloodless membranous cyst, you will observe that the sac is highly vascular, beset with patches of ecchymosis, and covered with a greyish-white layer of aplastic lymph, with points of greenish discolouration, and areas of fatty transformation.

The theory of inflammation of the sac of the

abscess, from the injury to which it has been subjected, as the cause of the consecutive fever after its spontaneous or artificial opening, is not original with me, my attention having first been directed to it by the article on Diseases of the spine, contributed, 1862, by Mr. Alexander Shaw, of London, to the *System of Surgery*, edited by Mr. Holmes. Mr. Shaw does not appear, however, to have utilized the explanation as a guide to practice, since he merely advises that such abscesses be treated on general principles. Other authors hold substantially similar views, among the most recent of whom is Professor Hodgen, of St. Louis, who, in a paper on Antiseptic Surgery, contained in the *Transactions of the International Medical Congress*, Philadelphia, 1876, says that the bad symptoms consequent upon opening chronic abscesses are not due so much to the admission of air as to the rekindling of destructive inflammation in their walls. Having based the management of these cases on the truth of the hypothesis, I am led to call your attention to it, with the hope that it may prove as efficient in your hands as it has in my own.

The essential elements of the treatment are, first, to afford rest to the sac by support of its walls; and, secondly, to tranquillize the system at large, and control morbid action by the free exhibition of anodynes.

To fulfil the first indication, after the evacuation of the pus by a free incision, whereby an outlet for any detached fragments of bone is also afforded, adhesive strips, about one inch in width, are applied over the empty abscess, in such a manner that each succeeding one shall envelop one-half the preceeding one, care being taken not to embrace the entire body or limb, as the case may be. An opening having been made in the dressing, so as to admit of free drainage, a large, soft, flat, moist sponge is confined over the parts by a couple of adhesive strips and a roller, and kept wet to promote its expansion, whereby gentle, equable, and systematic compression is steadily maintained. So long as the discharge continues to be abundant, the outer coverings will require a daily change, but the adhesive plaster may be allowed to remain as long as it retains its hold, although for the first few days substitution will be