

## REVIEWS OF BOOKS.

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THE COTTON-WADDING DRESSING AND ITS APPLICATION TO SURGICAL THERAPEUTICS [*Du Pansement Ouatè et de son application a la therapeutique chirurgicale*]. By ALPH GUÉRIN, President of the Academy of Medicine, Honorary Surgeon to the Hôtel Dieu. With figures intercalated in the text. Paris: J. B. Baillièrè et Fils. 1885. 12mo. Pp. 392.

In this little book, Guérin relates in vivid and vivacious, but rather diffuse style, the history, development and applications of a dressing which has been so overshadowed by that of Lister, brought out about the same time and founded upon the same general principle, that it is little known beyond the limits of its birth place. The author claims to have held for many years that septic infection, consequent upon inflammatory processes, arose from influences extrinsic to the system of the patient, attributing it at first to the presence of miasms in the atmosphere, and, finally suspecting that it originated in the influence of ferments, germs, microbes present in the air, he undertook to devise a method to prevent the access of these germs to wound surfaces. Pasteur's famous demonstration of the absence of microbes in the air which had been filtered through a cotton plug in the mouth of a flask in which a vacuum had been previously created, was the foundation upon which the dressing was at last built up. Guérin conceived the idea that, if a wound could be so perfectly enveloped in cotton wadding as to prevent the access of air except through the meshes of the cotton, septic infection would be avoided and the most rapid healing secured. Lister sought to prevent sepsis by killing the germs: Guérin sought to obtain the same end by keeping them away.

It is a marked defect in the book that no description is given of the method in its general application; the reader can gain an idea of it only from diffuse descriptions of its application to numbers of special cases. The procedure as gained from these sources may be said to be as follows: All vessels having been ligatured with care, hæmostasis being complete and the wound thoroughly irrigated with a five per cent carbolic solution, it is covered with layers of cotton wadding rolled about the part affected and covering a large portion of the ad-

jacent surface so thick that, when bound down, pressure over the wound occasions no pain. The bandages are then applied, the first making but slight compression, in order to secure uniformity of pressure throughout each layer of bandage; others are then bound about the dressing, with gradually increasing tightness, until finally they are drawn with the entire strength of the wrist. It should be possible to strike with considerable force over the wound surfaces without occasioning the slightest tinge of pain. In case this is not secured at first, additional layers of cotton should be added until no painful sensations can be conveyed through the mass. After a time the bandages are apt to loosen. It is of vital importance to the success of the method that this should not occur to an extent sufficient to admit the air, and care should be taken to apply new bandages tightly over the former, as soon as any loosening is observed. The dressing, once properly applied, should be left in place for a period varying from ten days to several weeks and even months, according to the nature of the wound and the result desired. Great care is requisite in redressing a wound to avoid infection by exposure to an infected atmosphere.

While laying great stress upon the filtration of the air as the source of success, the author also attributes great benefit to (1) the elastic compression secured by the dressing, (2) the immobilization of the wounded parts and (3) the constant temperature. The elastic compression is certainly of great advantage and in no other way can it be obtained in so uniform, painless and constant a manner as in this; the same may be said of the immobilization of the wounded parts, while the constant temperature would also add to its efficiency.

The manner of application is also of vital importance to its success. In the hands of Guérin himself it has been uniformly successful in securing primary union in amputation and other operation wounds, while he acknowledges that some others have not obtained as good results, attributing the failure to incorrect application. Dolbeau applied the dressing for an amputation of the thigh. When it was removed, on the fifteenth day, he discovered, to his great consternation, that though the flaps had united by first intention, the severed end of the femur protruded from the centre of the stump between the flaps, which were firmly united to the periosteum. The dressing was eminently successful in securing primary union, and the unfortunate result could have been due to no other cause but an improper application of it. The importance of this point could alone justify the large amount of space devoted by the author to the details of the application of his procedure to special cases.

No drainage tubes are used, the author considering their action to

be that of foreign bodies, interfering with the healing process. In case there is a probability of need for drainage, a few strands of cotton twisted together are used for the purpose.

The value of this dressing is perhaps best illustrated in its application to extensive burns. Immediately upon its application the patient's suffering is relieved and he remains in comfort until it is removed. Cicatrization proceeds rapidly but not normally, for the cicatrix under the cotton-wadding dressing is soft and without excessive contractility, nor does it form a prominence on the injured part. A woman suffered a severe burn of the right breast, arm and forearm. To the arm and forearm the *pansement ouaté* was applied. It was omitted from the breast because of paroxysms of dyspnœa, which it caused, and a dressing of glycerine applied. Cicatrization of the limb was complete in about two months; the cicatrix was smooth, soft and on the same line as the skin, from which it could be distinguished only by its more rosy hue. There was not then, nor at any later period, any traces of contraction. The cicatrization of the chest under the open dressing, was, on the contrary, very slow, not being complete, even with the aid of grafting, until four months later; the cicatrix was then rough, raised above the level of the skin, with radiating ridges and contracted so strongly as to draw the nipple well over on to the side. The dressing seems to modify the growth of the newly formed tissue and keep it in the most favorable condition; by its compression diminishing local congestion and by the filtration of the air, precluding the access of septic germs. In this way the inflammatory action is prevented from affecting the new skin as soon as its elements appear and forming nodular tissue with the great contractility characteristic of it.

One of the most important applications of this dressing is in the treatment of arthritis, in this case the compression and immobilization which it secures being the source of its power. The writer can vouch for its utility here from his own experience. A case of arthritis, affecting the wrist joint had been under treatment several months by ordinary methods, without any improvement. Immediately upon the application of Guérin's dressing the pain ceased and the swelling began to diminish. The patient has worn the dressing for two weeks, during which time he has suffered no pain; the effusion seems to have been entirely reabsorbed, his total recovery is a matter of a very short time.

An objection to the method in practice is that it demands a very large amount of the cotton and of bandages and a not inconsiderable amount of labor in its application. This is more than counterbalanced, however, by the fact that renewals are very infrequent.

This method might have commanded a wider acceptance, however,

if it had not been promulgated just at a time when positive scientific tests were being applied to the merits of wound dressings, and when a deeper insight into the requirements of a satisfactory wound dressing had been gained. All that the dressing of Guérin can justly claim to accomplish is to protect a wound from gross external irritants, and supply equable compression and temperature. In many cases it will answer well, but in many classes of cases of the greatest importance it must be attended with disaster. The enthusiastic claims for it by its deviser may be taken with a great deal of allowance. The method has been before the surgical world for its judgment for fifteen years or more, and, notwithstanding the publicity and the authority which its practice in the wards of the Hôtel Dieu of Paris have given it, it has never come into any general use outside of the service of Guérin himself.

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II. TRACHEOTOMY IN LARYNGEAL DIPHTHERIA: AFTER-TREATMENT AND COMPLICATIONS. By ROBERT WILLIAM PARKER, Surgeon to the East London Hospital for Children, and to the Grosvenor Hospital for Women and Children. Second edition. London: H. K. Lewis. 1885.

The second edition of Mr. Parker's work on Tracheotomy in Laryngeal Diphtheria is more complete than the first edition, which appeared a few years ago. Since then he has increased his number of cases from twenty-one, with twelve recoveries, to thirty-two, with seventeen recoveries. The chapter dealing with the operation itself has been considerably added to, and a chapter on complications, with some well executed illustrations, is both interesting and instructive. The first chapter contains a brief history of tracheotomy and a few hints for the general treatment of diphtheria. Mr. Parker strongly recommends the avoidance of all depressants, especially antimony. He is a very firm believer in the local treatment. He does not give any great preference for one drug over another, but says; "I do not think the material used is a matter of first importance, it is rather the manner in which it is used and the thoroughness with which the infective products of the local lesion are got rid of, to which I should trust in any given case."

His directions as to the time when operative interference should be had recourse to are short, but to the point. He himself is guided by the breathing rather than anything else; difficulty in expiration being always an indication for immediate operation. He then gives some very useful aphorisms concerning this disease. Chap. IV. opens with a short account of the surgical anatomy of the parts concerned in