...ic study, which appear separately in the *Lyon Medical*, and these observers arrive at conclusions nearly similar to those expressed by M. Reverdin in his essay which appeared in the *Archives Generales de Medicine* (March, May, and June, 1872). M. Reverdin, on examining the graft forty-eight hours after it had been transplanted, saw that granulations were separated from the graft, and plunged down between the body of the graft and the embryonic tissue of the ulcer, with which the granulations ultimately coalesced to form a single tissue. To these prolongations he gave the name of '*bourgeons d'enchassement*,' or 'stilt granulations.' He next describes the formation of the cicatrix round the graft. The cells, springing from the graft, have apparently only one nucleus, and he never saw any appearance of it dividing, so that there is nothing to indicate a proliferation of the elements, and in this MM. Poncet and Colrat agree with him. And M. Reverdin further states, seeing that there is nothing to indicate formation of cells from a blastema, that the only hypothesis at which he can arrive is, that the transplanted epidemis determines, by its presence, the transformation of the embryonic cells of the granulations into epidermic cells; that is to say, that the epidermis of the graft will only form a mould or model to the embryonic cells. In practising zoo-grafting, however varied the animals were from which he obtained the grafts, they always produced the same kind of cicatrix, namely, the ordinary cicatricial tissue found in man.

Opposed to this view, we have the theory which ascribes the principal *role* in the production of the cicatrix to the connective tissue; and this is advocated by M. Ollier, who cites, in support of his views, the success obtained by him in producing cicatrisation by means of a graft of periosteum. He might also have added the clinical observation of Howard, with his muscle grafts, as at least opposing the theory of Reverdin.

Probably the matter would be much more easily solved, did we know the mode of growth of the ordinary epithelium. We might then be able to ascertain the difference between the formation of ordinary and cicatricial epithelium; and we would also be better able to ascribe the correct theory to the production of the cicatrix from the grafts. Dr. Otto Weber, long ago, stated that he had seen new cells emanate from connective tissue corpuscles of granulating surfaces. Again, many believe that the epidermic and epithelial cells are derived from the primitive embryonic cells, and that each must be derived from its parent by division of its nucleus; and several observers state that they have seen cells actually undergoing a process of subdivision. The view of Reverdin has been accepted by many; but we think that there is some other cause, some other influence or agency at work in producing the cicatrix from the islets instead of the mere presence of a 'mould.' It finds no homotype in the animal body. The reviewer in the *Glasgow Medical Journal* agrees with a remark of M. Marduel, that there is still abundant room for scientific investigation, as the facts above quoted by various authors require to be further tested before any decided opinion can be pronounced.

INDIA-RUBBER BANDS IN THE TREATMENT OF FRACTURES.

Dr. J. W. Southworth, of Toledo, Ohio, writes to the Buffalo Medical Journal as follows:—There are few who have not unfortunately found, after a first or subsequent dressing of a broken limb, that the straps had become loosened, the splints and fragments of the bone displaced, which were carefully adjusted and treated secundum artem. This misfortune we have often, no doubt, very justly attributed to the imperfection of the means at our command; though sometimes, very properly, to the refractory or careless disposition of the patient, this being most common in young subjects, whom it is more imperatively the part of the physician to cure with as perfect and useful a limb as possible. Such a desideratum, he states from personal experience, is attainable by the substitution of elastic retention bands in lieu of the ordinary inelastic cloth bands or bandages, or straps of webbing. These elastic straps are most promptly improvised by taking common India-rubber bands (from one quarter to one half inch in width, by two inches in length), doubling them and passing strips of strong muslin or factory cloth through the doubled band so as to make it a part of the strap; thus allowing it to be stretched to the extent deemed advisable to produce the requisite degree of constricting force when applied around the splints.

In fractures of the fore-arm treated with two lateral splints, four such straps usually suffice for grown persons, and for children also; but in them the smaller-sized bands (doubled) are to be used. In fractures of the leg or thigh more will be necessary, of course. Where two parallel lateral splints are used, as in fractures of the fore-arm, the rubber portion of the encircling straps must be placed between the opposing splints alternately on the superior and inferior borders, so as to counterpoise or preserve the balance of the constricting forces; and in cases of the arm, leg, or thigh, where more splints are used, the rubber part of the straps should be likewise adapted to the interspaces of the splints, in order to attain the same object as nearly as possible.

By these means a sufficient amount of retentive force is constantly in operation, and if much swelling takes place there will be a conservative yielding of the encircling bands, which is not the case where cloth, webbing, or leather straps are used. Also, when the swelling subsides, no matter how rapidly, there is always a coincident as well as a commensurate adaptation to the diminished size of the limb, through the agency of the agency of the India-rubber. As an after-dressing, when osseous union has taken place, and nothing but a precautionary use of splints is required, the use of the elastic bands or straps around either sole-leather, pasteboard or felt splints is the most perfect dressing, in Dr. Southworth's estimation, yet devised. He is quite sure that those who resort to their application will not dissent from such conclusion.

It is, of course, understood that proper support by bandages will be given to the injured limb below the seat of fracture, or at least up to the distal ends of the splints. By this plan we may bid good-bye to the cumbersome plaster-of-Paris after-dressing for all ordinary cases and circumstances.

THE REPLANTATION OF TEETH.

Mr. J. O. Smith, of Babylon, Long Island, in a communication to the Dental Cosmos, says that in his practice replantation of teeth has nearly ceased to be an experiment. Within the last three years he has successfully performed the operation on five teeth (two for one patient). In each case the tooth was badly decayed and the root ulcerated. After extracting and treating the tooth-socket, he treated the root, and filled not only the cavity but the nerve-canal in the root, and replaced the tooth; and without an exception each operation has been a perfect success.

The first patient whose tooth he treated in this way was a young man who had an ulcer, which gave him much trouble, on the superior incisor. It had been filled several times with different materials without satisfactory results, and he was obliged to have it extracted; and as an experiment he offered to undertake the operation of replacing it, after removing the ulcer and properly filling the tooth. The operation consumed about seventy minutes. There was much sensitiveness about the tooth at first, which soon subsided, and about a year afterward he had the other superior incisor treated in the same manner. It is now over two years since the last operation, and to use the patient's own words, "they are the best teeth I have." Since then Mr. Smith has performed the operation on three different patients, and every case has proved a perfect success.

PRACTICAL MEDICINE.

CONVALESCENCE IN TYPHOID FEVER.

By F. Brittan, M.D., Bristol.

In the *Lancet* of July 5th appeared a letter from Dr. Latham on "Convalescence in Typhoid Fever," *apropos* of a case under my care in the Bristol Royal Infirmary, a report of which was published in the Lancet of June 28th by our able house-surgeon, Dr. Smith. Dr. Latham uses the case "as having an important bearing on the question—When is a patient convalescent from an attack of typhoid fever?" The only satisfactory answer to which he states to be, "after the morning and evening temperatures, and especially the latter, on at least two successive days have remained between 98° and 99°." In connection with the convalescence he also adds: "It is only after the evening temperature has remained on at least two successive days below 99° that we can be sure that the ulcers have healed, and that solid food may be given without risk." Dr. Latham desires further information as to the relations of my case to the "rule" he has thus laid down, and appeals to clinical observers for information whether their experience has confirmed or negatived it.

Regarding the "convalescence" and the "healing of the ulcers" in typhoid fever as, for our present purpose at all events, pretty nearly synony-