PARAFFIN INJECTIONS FOR NASAL AND OTHER FACIAL DEFORMITIES, WITH EXHIBITION OF A NEW INSTRUMENT.

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Historical.—The credit for the introduction of paraffin injections for prosthetic purposes appears to belong clearly to Gersuny, who, in reporting his first cases in 1900, states that he had been conversant with the method for a number of years. But the idea of injecting solidifying oils for purposes other than prosthesis is considerably older than Gersuny and the credit for first carrying out the principle appears to belong entirely to Dr. Corning of New York, who injected solidifying oils for the relief of pain as far back as the eighties. We have not space here to cite the numerous ways in which Corning made this principle valid in combating pain, and must refer those who are interested in the subject to an editorial in the Medical Record for February 1st, 1902. The early work of Gersuny and his successors was directed entirely to prosthesis, and only after this use of paraffin had become well-established did it become apparent that the principle contained the possibility of a wider range of usefulness; and we find that Gersuny* has recently recommended his paraffin injections to prevent the reunion of nerve segments after neurectomy—just as Corning had done many years ago in the attempt to cure occipital neuralgia.

But the subject of prosthesis is in itself so important and far-reaching that we are justified in shelving any other uses of paraffin injections in this connection; and since Gersuny first published his experience in this field, the method has become widely known and endorsed on all sides. As all new therapeutic resources have to run a gauntlet of hostile criticism, it need not surprise us that paraffin prosthesis has been antagonized on various grounds. It

*Gersuny's Method (Moskowitz in *Wein. Klin. Woch.*, No. 25, 1901).

Technique: Gersuny used vaseline, known officially as "ungt. paraffini." This substance is known to the profession as "white vaselin for medical purposes." Its melting point is 36° - 40° C. - 97° - 104° F. At room-temperature this substance has the consistency of an ointment. It is sterilized by boiling, taken into the syringe and allowed to cool. When completely cool it is injected in the form of a fine thread.

has been claimed that the substances injected may exhibit toxic properties, that they may excite a serious local reaction and, finally, that they may induce paraffin embolism of the lungs.

Gersuny claimed originally that there is absolutely no inflammatory reaction following the injections; but in his later writings he conceded that there is a slight, albeit harmless, reaction. It is as well to admit that, whether from defects of antiseptic technique, or from causes less thoroughly understood, abscesses may form and sloughing may occur, and it is even related that "symptoms of tetanus" followed an injection of paraffin (Robinson). But accidents of this sort must be extremely infrequent, for the great majority of reported cases are devoid of any complications of this sort. In regard to chemical intoxication from absorption of paraffin or its derivatives, this is now conceded to be impossible with a chemically pure substance. Cases of alleged intoxication have indeed been reported, but they can be explained only upon the supposition of impure injecting substance.

The subject of paraffin embolism of the lungs has been made light of in this connection. This accident has occurred a number of times in connection with the injection of vaselized calomel for syphilis. The two conditions are hardly similar, for in the anti-syphilitic treatment, the oil is not intended to become solid. Nevertheless pulmonary embolism is possible with Gersuny's original method of injection, as witness a case of Pfannenstiel's in which the former's directions were closely followed. But paraffin embolism of the lungs, however alarming the symptoms, is really a benign affection; and Gersuny now claims that by injecting the paraffin in a solid form, such an accident is impossible. Bearing all that has been said in mind it must be admitted that the injection of paraffin is a thoroughly benign procedure which has no more complications than any other form of minor surgical intervention.

Clinical.—Following Gersuny, many observers have used paraffin to fill up congenital gaps, as well as to overcome deformities resulting from cicatrices following loss of tissue; but in no part of the body has its use been more forcibly demonstrated than for the correction of congenital, traumatic and specific affections of the external nose.

The different contributions that have been voiced from various parts of the medical world, and the claims made by clinicians, have amply demonstrated that this adjunct to our present working arma-

mentarium has come to stay; and, although as yet enjoying a probationary existence, the results so far ratify its value and enhance its weight by the testimony of operators in this special field of medicine. Gersuny little dreamed, when he filled that scrotal pouch with vaseline, that this material would be injected into the many accessible cavities, and that untold benefit would result from its introduction. Surgeons have forced other preparations of paraffin into hollow cheeks, into the bladder, the rectum, and even the breast of the female has not escaped its invasion, and it has been recommended to contract the inguinal ring in hernia, and for the prevention of vaginal prolapse.

The various depressions attended by facial deformities that are daily met with in our clinics have been improved by this unique remedy. The external structure of the nostril has received its share of attention, and deformities that could only be overcome by mechanical supports of celluloid, tin, silver, gold, etc., are to-day treated by the paraffin method of injection with excellent results.

Haskin has recently demonstrated its utility in filling bony depressions following mastoid operations.

Harmon Smith exhibited at the Academy of Medicine, within a short time, a number of interesting cases which bore their weight of testimony, and reference may be made to the results of Stein in Bergmann's clinic, who cites a case of typical saddle nose cured by this subcutaneous injection.

Heath's recent article in "American Medicine" amply strengthens the many foregoing contributions. He offers in evidence the case of a man, aged 32 years, with entire absence of cartilaginous septum. One and one-half drams of paraffin at a temperature of 37° R. was injected between the eye-brows, and carried subcutaneously to the point of depression. The report of this method shows excellent results.

The technique hitherto employed has been attended by so much annoyance from the coagulation of the wax, due to the small opening of the needles found at present in the market and the peculiar temperature incident to the solidification of this agent; and it was therefore with much difficulty and considerable trouble that this material could be forced into the cavities. Many have abandoned the method on account of the disappointment due to its faulty manipulation.

A few words regarding the mechanism of the instrument sub-

mitted to the society may not be out of place here. An ordinary glass antitoxin syringe with a needle of a large calibre is used. This is encased in a metallic hood or jacket through which flows water at a temperature of from 118° to 125° F. This hood is fed from a receptacle holding not less than one to two quarts of water of the temperature named, which is placed on an elevation of from one to two feet above the operator. From this vessel a small rubber tube is attached to the hood, thereby allowing the operator to throw the fluid into the distal point of any cavity desired. The instrument presented is one of simplicity, the glass syringe being preferred to the metal one, in order that thorough cleanliness may be maintained, and the contents of the barrel viewed at all times. Asepsis is one of the most important elements in the manipulation of this remedy. Paraffin must be carefully sterilized.

The above cut represents the coil or barrel around Syringe. A is point of entrance of hot water, and B its exit through tubing. This instrument was made for me by J. E. Kennedy & Co., New York City.

The skin, for some distance about the point of puncture, should be thoroughly cleansed with a strong antiseptic solution, in order to render sterile the field of operation. Care must be taken that too much fluid is not forced into the cavity, as it is better to make subsequent injections than to render tense the structure by overfilling. Some attention must be given to the cellular tissue above the nasal bridge and on the sides of the nostrils, as abscesses may result, and in one instance even destruction of the lachrymal duct has been noted. After injecting the fluid, the operator can mould the substance to any desired shape or form by external manipulation. It is customary to spray the site with an iced antiseptic solution, and to seal the puncture with aseptic collodium, although

this is not always necessary. Some observers have thought that this fluid is absorbed, but as connective tissue replaces it, and maintains the desired form, it matters but little, so long as the deformity is corrected. The substance encapsulated, in a short time assumes almost a bony hardness, without exerting undue pressure upon the surrounding tissues.

The deductions from this method of medication seem to warrant a fair and further trial in a number of selected cases, and hence the argument for its use in many deformities on and about the face. The writer wishes to place before the Section his contribution to this method of medication, and reviews his work at the various clinics where he has given it a fair and honest trial. The results obtained seem to justify the continuance of this excellent and reliable agent. In thirty-two cases where this method was employed by the writer, but two unfavorable results followed. The first in a man of advanced years, with marked syphilitic destruction of the bony and cartilaginous septum, as well as almost collapse of the external framework; the second, in a chronic alcoholic, who developed a slight cellulitis afterwards.

In reviewing the work along the line indicated, the writer is satisfied that a new avenue has been opened up for the rhinologist in correcting marked deformities with but little risk.

The requirements for this operation are absolute asepsis and careful introduction of this fluid into the cavity.

It is now nearly 18 months since the author made his first injection for nasal deformity, and to-day, after due reflection, with the reinforcement of this new equipment, he feels that the novice and the expert can equally distribute this fluid where it is needed, with perfect safety to the operator, and to the delight and satisfaction of the patient. The field of paraffin prosthesis is limited only by the confines of surgery itself, and it is mere supererogation to detail the possibilities of the method. Wherever there is a defect of either hard or soft tissues, congenital or acquired, the injection of paraffin may render service, whether for a mere anatomical (cosmetic) or physiological end.

One point may be mentioned under the head of technique. It does not appear to be understood by the followers of Gersuny that the latter now injects his paraffin in the solid form. He allows the melted substance to cool in the syringe and forces it into the tissues in the form of a fine thread. In this way the possibility of paraffin embolism of the lungs is avoided.