

tion, however different the displacing forces may be. The duty of therapeutics, therefore, consists simply in removing those alterations in the pelvis which displace the cervix forward and the corpus backward. Every effectual treatment of retrodeviation has to begin with a replacement of the displaced organ. It is surprising that some physicians still practice instrumental replacement—a treatment that ought to be rejected by all physicians, as it is not only unscientific but even dangerous. Only in cases in which an excess of adipose tissue or an exceedingly large pelvis renders replacement difficult may we use instrumental replacement. Ziegenspeck devotes an entire chapter to the technic of manual replacement of the uterus and describes in a clear and complete manner the different methods of replacement for the various forms of displacements.

Posterior adhesions of the uterus are not the cause but the consequence of retrodeviations. In these fixed retroflexions, too, we must endeavor to replace the uterus as soon as possible, and as this can be accomplished only by severing the adhesions, the latter manipulation is the first step in our procedure, and is done by means of massage or by loosening them under anesthesia. People who abhor the surgeon's knife and generally dread an operation are easily persuaded to submit to such a treatment. Ziegenspeck claims never to have seen any harm accruing from this method of loosening. After loosening allow rest for some days; perhaps the use of an ice-bag may be valuable, and as soon as possible remove any parametric bands—the real causes of retrodeviations—by means of massage and stretching. To avoid relapse the introduction of a pessary may be indicated. Generally speaking, in cases of fixed retrodeviation the prognosis as regards a permanent cure is a very good one, a majority of them finding permanent relief. But only after the removal of those *parametric* fixations which gave rise to the retrodeviations does the uterus remain in normal position.

Under the head of "Competitive Methods for Treatment of Retrodeviation," Ziegenspeck describes the different operations suggested for retrodisplacement, together with other therapeutic methods generally used.

Although Thure Brandt himself claims that the curing of prolapse constitutes the weakest part of the whole of his therapeutic method, yet no case should be treated in another manner before Brandt's method has been given a trial, and as it is an unanimous sentiment of the most experienced gynecologists, corroborated by a large part of the cases examined by Professor Ziegenspeck with this particular object in view, that but few prolapses occur without inflammations being found in the adnexa, a permanent benefit is always secured even if the prolapse itself remains uncured. A selection of the most varied views concerning the genesis of prolapse precedes the description of symptoms, pathologic anatomy and treatment by Brandt's method, with a description of the different operations for the supposed cure of prolapse.

In regard to the indications for massage, we may state in general that in all those affections in which operative procedures lead *more quickly and without evil consequences* to a certain cure, these ought to be undertaken; furthermore, that any acute inflammatory condition and the existence of an infectious focus strongly contraindicate massage. As some of the special indications for pelvic massage, however, may be mentioned: old exudates, the sequelæ of pelvic

cellulitis; chronic affections after perioöphoritis and ööphoritis, and displacements of the uterus. In chronic metritis and endometritis the results of pelvic massage are also very favorable. In the last-mentioned affection massage will, however, sometimes constitute the after-treatment of curettage. In subinvolutions of the uterus, undeveloped conditions of the pelvic organs, where, in the majority of cases we do not succeed with other means, excellent results have been achieved by massage. Tenderness of stumps after operations, or any tenderness in the pelvis will be effectually removed by this method.

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REPORT ON MASSAGE.

MESSAGE AMONG THE NAVAJO INDIANS—EFFECTS OF MESSAGE UPON THE SECRETION OF THE GLANDS—MESSAGE AND FARADISM AS ANALGESICS.

BY DOUGLAS GRAHAM, M.D.

BOSTON, MASS.

A method of curing the sick amongst the Navajo Indians of Arizona is given by James Stevenson in the "Ceremonial of Hasjelti Dailjis," in the eighth annual report of the Bureau of Ethnology, Washington, 1891, from which the following abstract is made. For a prehistoric, antediluvian performance in modern times it surpasses anything I have yet found:

During his visit to the southwest in the summer of 1885 it was Mr. Stevenson's good fortune to arrive at the Navajo Reservation a few days before the commencement of a Navajo healing ceremonial. The ceremony was to continue nine days and nights. The occasion drew to the place about 1200 Navajos, on an extensive plateau near Keane's Canyon, Arizona. A variety of interesting occurrences attended the great event, such as mythologic rites, gambling, horse and foot racing, general merriment, and curing the sick, the last being the prime cause of the gathering.

A man of distinction in the tribe was threatened with loss of vision from inflammation of the eyes, which was supposed to have arisen from his looking upon certain sacred masks with an irreligious heart. He was rich and had many wealthy relatives, so they "soaked it to him." A celebrated theurgist was solicited to interfere. He arrived Oct. 11, 1885.

A bright light burned in the lodge, and shortly after dark the invalid appeared and sat upon a blanket in front of a song-priest. Three men personated the gods, Hasjelti, Hostjoghon, Hostjobokon, and one the goddess, Hostjboard. They left the lodge and put on their masks.

On the second day, after singing and chanting and pouring medicine from a gourd on heated stones, Hasjelti lifted the coverings from the entrance to the sweat-house, and the patient, having donned his breech-cloth, came out and sat on a blanket. Hasjelti then rubbed the invalid with the horn of a mountain sheep held in the left hand and in the right a piece of hide from between the horns of the sheep. The hide was held flatly against the palm of the hand, and in this way the god rubbed the breast of the invalid while he rubbed the back with the horn, occasionally alternating his hands. After this Hostjoghon put the invalid through the same "course of sprouts." The gods then gave him drink four times from the gourd containing medicine-water, composed of finely chopped herbs and water, from which they had first taken a draught themselves.

On the third day the same procedures, with variations, took place. This time Hasjelti began with the limbs, and as he rubbed down each limb he threw his arms toward the eastern sky and cried "Yo, Yo!" He also rubbed the head and body, holding the hands on opposite sides. After this the sick man again drank from the bowl of medicine-water.

On the fourth day, after the invalid had drunk of pine-needle water and been bathed with the same, Hasjelti manipulated the right leg with the sheep's horn and hide, rubbing the upper part of the leg with the right hand and the lower part with the left; then the sides of the leg in the same manner, each time giving a hoot. The arms, chest, face and head were similarly manipulated, and every time he changed the position of his hands he gave a shout.

On the eighth day the hands were placed to the soles of the feet, varied with hooting, then "the heart of the invalid was touched" with the palm of the right hand, the left being placed upon the back. The body was pressed in this way four times amid loud cries. After touching each figure of a sand-painting, the right hand was placed to the forehead of the invalid and the left hand to the back of his head and the head pressed this way on all sides.

Many other details are given, but quite enough has been said. Whether the invalid was killed or cured does not appear. At any rate his pocket must have been touched, seeing that he had to pay for all this racket, including the entertainment of the 1200 Navajos.

ACTION OF MASSAGE UPON THE SECRETION OF THE GLANDS.

We now turn from the weird, superstitious and grotesque to the sunny light of science. M. Carlo Colombo of Turin, before the Société de Biologie on Jan. 25, 1895, gives an abstract of experimental researches which he made in the laboratory of M. Francois-Frank at the College of France. These experiments were done upon dogs in order to find out the effect of massage—applied locally in the region of each gland or collection of glands—upon the secretion of gastric juice, of bile, of saliva, of urine, of semen, of tears and of sweat. He has collected directly the secretion from each organ studied; the gastric juice by means of a gastric fistula, the bile by a biliary fistula; the saliva, the urine, the sperm, the tears, by means of canulas introduced into the canals of Steno and Wharton, into the ureters, into the vasa deferentia and into the naso-lachrymal canals. The sweat was obtained from a man by means of a hot bath. He ascertained the quantity and the chemic composition of the secretion which was produced by each gland, or collection of glands, in a certain lapse of time *without massage*. After *massage* he made the same examination of these secretions which had flowed in the same length of time.

Gastric juice.—In consequence of massage, the quantity of liquid which flowed through a gastric fistula for two hours was more than double that which flowed in the same time without massage. A part of this was mucus, the remainder gastric juice. Massage for five minutes caused but little variation in the secretion; but continued for fifteen minutes, the maximum of secretion was produced. When the massage was prolonged beyond this time, the proportion of hydrochloric acid and pepsin did not increase any more, but the mucus became more abundant and the gastric juice was more diluted.

Bile.—The quantity and the chemic composition of the bile secreted during four hours did not vary appreciably after ten minutes of friction upon the hepatic region and of *pétrissage* or kneading of the lower border of the liver. But after ten minutes of *trepidation* (shaking or vibration) and of *tapotement* or percussion, the quantity of bile increased considerably in the next four hours. The cholesterin and the biliary soda salts were more abundant. After twenty-five minutes of friction and of *pétrissage* the same results were obtained as after ten minutes of *trepidation* and *tapotement*. The maximum result was obtained by combining ten minutes of *trepidation* and *tapotement* with ten minutes of friction and *pétrissage*.

Saliva.—The submaxillary glands were more sensitive to massage than the parotid—their secretion began to increase after five minutes of massage, and after ten minutes of massage the maximum secretion was obtained either in the submaxillary glands or the parotid. The saliva which flowed from the glands was similar to that which was obtained by exciting the chorda tympani; it was clear liquid, very watery and rich in alkaline chlorids.

Urine.—The quantity of urine secreted by the kidneys during four hours, the region of which had been submitted to massage for ten minutes, was increased. There was a diminution of the specific gravity, and at the bottom of the vessel there were abundant deposits of epithelial cells, and slight traces of albumin were found. The other constituents did not vary. Subsequent examinations showed that the albumin existed in the urine only during the five minutes after massage; later it was not found.

Sperm.—The testicle that had been *masséed* secreted during twenty-four hours almost double the quantity of semen that was secreted by the other testicle that had not been *masséed*. The sperm collected from the divided vas deferens was reduced to that of testicular juice. The quantity was small and showed an increase of water, of chlorid of sodium and of phosphate of spermatin. The spermatozoids were numerous and active.

Tears.—Massage applied to one of the lachrymal glands produced, by a reflex bilateral action, an equal increase of secretion of both glands. The liquid which was secreted during six hours in consequence of massage was of the same chemic composition as that secreted by excitation of the trigeminus, it was clear and watery, and the chlorid of sodium in it was considerably increased.

Sweat.—The perspiration collected after massage was more profuse than without massage, in the same length of time, twenty minutes. Its density was diminished; it showed a slight alkaline reaction and was relatively deficient in potassic salts, in urea and acids. It also presented a deposit of superabundant epithelial cells.

General Conclusions.—According to these results, viewed collectively, it would seem that we observe not only an increase of the specific elements of each secretion in a constant measure, but also a still more considerable increase of the water in which these elements are dissolved. We can therefore, it seems to us, infer that the massage acts by a double process—on one hand it accelerates the function of the glandular epithelium; on the other, and perhaps in a still greater measure, it determines in the organ a more abundant afflux of blood, which favors filtration.

MASSAGE AND FARADISM AS ANALGESICS IN THE
LOOSENING OF JOINT ADHESIONS.

The *London Practitioner*, Vol. li, No. 2, and the *Revue d'Hygiene Thérapeutique*, May, 1895, have given the experience of Douglas Graham with massage and the faradic current in relief of pain caused by loosening adhesions about joints. It was in 1884 that he began using a strong faradic current for the immediate relief of pain caused by forcible stretching and loosening of adhesions, and he has continued to do so ever since, with, in almost every instance, more speedy relief than could be obtained in any other way. Partial relief is usually immediate, and complete relief soon follows—in from thirty to forty hours—so that the stretching and rupture of adhesions can be repeated several times at one sitting—a procedure to which patients willingly submit, knowing that the pain can be so quickly stopped. Massage accomplishes the same purpose, but in general not so quickly.

His plan in these cases is first to ascertain how much active motion the joint is capable of, then to find the limits of passive motion, after which he proceeds with massage, alternating with gradually increasing passive motion until the limits of the latter without breaking adhesions are reached. If these can be started without putting the patients under ether he does but little at a time; then having a faradic battery in action at hand he applies a strong current by two tolerably large electrodes, covered with sponge or absorbent cotton, to each side of the painful joint or to its anterior or posterior aspect, or wherever the current is most accessible to the seat of pain, and usually in from thirty to sixty seconds there is complete relief. Then he proceeds with massage, gentle pressure and passive and resistive motion for ten minutes or so, after which he increases the passive motion to the extent of tearing adhesions a little more, and follows this by the same means of relief. In this way patients have immediate use of all the motion thus gained, and for adhesions that are neither too deep nor too strong, it is preferable to breaking them under ether. Under anesthesia so much is likely to be done at one time that the joint is lame and sore and useless for weeks or months often; or what is more and worse, the adhesions may re-form stronger than before, unless massage and passive motion be early applied to prevent this, which is seldom done. Furthermore, this plan of massage and passive motion gradually increasing to the extent of loosening adhesions will quickly show whether these are so deep and strong or the involuntary tension of the muscles so great, that they can not be entirely overcome without putting the patient under anesthesia. In doing this time is not lost, for massage with passive and active or resistive movements is the very best means to use preparatory to breaking adhesions under ether; for they facilitate the motion of the joint and the relaxation of the muscles as far as the adhesions will allow.

Graham had supposed that this method of using the faradic current for the relief of pain caused by the breaking of adhesions was in common use, but inquiry and research have failed to reveal to him that the analgesic effect of the faradic current had been used by anyone else for this purpose. When adhesions are slight and yield easily to moderate force, massage alone will prove sufficiently palliative; but where they are moderately strong and stubborn the faradic current would seem to afford the quickest means of

relief after stretching or tearing them; while for firm deep adhesions, with obstinate contraction, there is nothing but the forcible breaking of them under ether. In these last cases gentle massage alone has afforded immense relief as soon as ten hours afterward.

The use of massage, movements and faradism here outlined is particularly applicable to peri-arthritis of the shoulder joint, and troublesome cases of this kind can be worked out to a satisfactory termination. One case of this sort is referred to, where the faradic current was intensely disagreeable, but after an upward pull of the humerus so vigorous as to stretch or tear the adhesions, pain was speedily relieved by the immediate application of the current; and as soon as the pain had gone the disagreeable sensation of the current again became felt.

An excellent procedure in these cases and one which the author has never before heard of, is to tire out the stronger opposing muscles by means of resistive motion; as, for instance, in the case of the shoulder joint, the muscles that pull the humerus down, by making resistance at the elbow while the patient pulls this down. After a dozen or twenty-four pulls in this manner, the deltoid, which has long been weak from inactivity can often raise the humerus much higher, and thus shows much more clearly to what extent adhesions, if they exist, limit motion. This is taking advantage of the physiologic principle, that by increasing the contraction of muscles we at the same time increase their relaxation. A contracted muscle with a weight attached to it extends more than it does when relaxed with the same weight attached to it.

More recent experience proves to Graham that many of these cases get complete relief from the faradic current in from ten to twenty seconds after breaking adhesions. With practice and experience come skill. He has also tried the plan of attempting to stretch adhesions, shortened and indurated tissues while the faradic current is passing, and finds that it works well, lessening the pain considerably. In the case of the knee-joint, patients can apply the poles themselves.

(To be continued.)

THE PASSING OF ALCOHOL.

Read before the New York State Medical Association at the meeting held in New York City, Oct. 20, 1898.

BY JOHN M. FARRINGTON, M.D.

BINGHAMTON, N. Y.

In April, 1889, I presented a paper before the Medical Society of the County of Broome, this State, entitled "The Use of Alcohol in Medicine." This paper was published in the *New York Journal of Medicine*, Sept. 28, 1889. At that time I took the position that our text-books on materia medica and therapeutics needed revision, since their statements relative to the effects of alcohol upon the human system had been proven by modern research and observation to be erroneous.

In my article I made many quotations from our standard authors, a few of which I here repeat. "Alcohol is a useful food." "An important remedy in the various forms of pulmonary phthisis." (Bartholow.) "The early administration of the preparations containing alcohol furnishes our best means of counteracting the depressing action of disease in general." (Bidwell.) "Alcohol is the savings bank of the tissues.