were unmistakable proofs that the woman was really pregnant. Under the circumstances, the only thing to be done was, in order to avoid Cæsarean section, to make a new vagina, or rather to enlarge the representative of the one already existing. This was done by incisions carried to the depth of half an inch, at which point the narrow canal was found to terminate in a vagina, perfectly normal in all particulars. The operation was successful in creating a good vagina throughout its entire length, through which, at full term, a small, but fully developed, living child was delivered without assistance. In two years after this event, the woman, who had again become pregnant, was delivered of a living child without any complication whatsoever.

PROLONGED USE OF HYPODERMIC INJECTIONS OF MORPHIA.

By ROBERT M. OTIS, M.D., Cambridge.

Mrs. H., 29 years old, was taken, July, 1867, with a severe, dull pain in the abdomen, which was somewhat relieved temporarily by from three to six discharges, daily, of nearly a cupful of matter, apparently pus, from the rectum. After these discharges had continued six weeks, laudanum injections were ordered, and after two injections the discharge and pain ceased.

In the third week of August, sharp pains commenced about the right hip-joint, and extended along the thigh, interfering with walking. Soon the leg commenced to draw up, and by the last of August the foot could not be put to the floor. The pain about the hip-joint continued four months, with feverishness, headache and vomiting. Then an abscess began to discharge at the right groin, and continued to discharge two weeks. After this the patient improved, had a good appetite, could sit up, and touch the floor with her toes. A month later, pains came on again about the right hip-joint, much more severe in their character than before. No sleep was obtained for ten days. At this time, Feb., 1868, daily hypodermic injections of one-eighth of a grain of sulph. morphiae were begun; soon were increased to three or four daily, and in fifteen or twenty days the amount of sulph. morphiae injected daily was increased to sixteen grains. When the pains came on the second time, the leg began to draw up and later to roll out, and soon reached a position at nearly a right angle with the body, where it is now firmly ankylosed. In February, a second abscess

discharged for a short time. From February, 1868, till now (Feb. 1872), the hypodermic injections have been continued daily without a single exception, and save the first few days, the amount injected has varied from two and a half to sixteen grains daily. The morphine was first injected into the arms, then for a time into the left leg, but for the greater part of the four years into the right leg. Every point injected becomes a suppurating ulcer; at first very small, it increases in size and sometimes attains a diameter of an inch. The upper surface of the right leg from groin to ankle is entirely covered with scabs, scars and running sores. The upper surface of the left leg from groin to knee has not a piece of natural skin the size of a pin's head.

At present, two and one-half grains are injected morning and night. Occasionally, as at the menstrual periods, and times of excitement, an extra injection is made at noon. The solution, twenty grains to an ounce of water, is injected very slowly, each injection requiring a half hour. When the morphine is introduced quickly, the patient says everything stops; she feels greatly distressed; knows what is going on about her; can speak, but does not wish to; the pulse cannot be felt at the wrist; the whole surface of the body becomes intensely congested; then the lips tingle, there is a terrible roaring in the head, great oppression and violent thumping at the cardiac region. Slowly, the skin regains its natural color, and the patient is herself again.

An English writer, Dr. Wilson, says, "the most deadly faints I have ever seen were undoubtedly caused by the too rapid absorption of the narcotic, either from hurried injection, or from the accidental injury of the lymphatics, which became inflamed, and resembled cords on the skin." He mentions a case where the first few drops rapidly introduced caused nausea, which soon passed off, and then the larger residuum could be injected rapidly and safely, whereas an increase during the nausea would produce most threatening symptoms of prostration. Mrs. H. has been nauseated only once by the injection.

Anstie says, "the prolonged use of hypodermic morphia in large doses produces general enfeeblement of nervous power of all kinds; the intellect, and even more strikingly the moral energy steadily declines, and a notable degree of hypersensitiveness to trivial sources of irritation becomes more apparent from day to day.

There are changes of nutrition in the tissues; at least, I am under a strong impression that a particular kind of muscular atrophy which especially attacks the facial muscles is one of the results of large and long doses of hypodermic morphia." As long as the ulcers caused by the injections discharge pus, Mrs. II. has a good appetite, is lively, bright and amiable. A person seeing her and not knowing the history of the case, would never suspect that the patient was out of health, so cheerful and lively is she at all times. The clearness of the complexion is especially noteworthy. When the ulcers cease to discharge, the patient becomes feverish, and either vomits, coughs, or has a diarrhoea, and discharges from the stomach, bowels or lungs, matter having the same appearance as that coming from the leg. Generally, the discharge is from the stomach. The leg usually stops discharging matter every three or four months. Since last April (1871), the leg has not ceased discharging, and since the same time the patient has menstruated regularly. The discharges from the stomach, bowels or lungs have a marked connection with the amount of morphia injected, the patient requiring much less morphia after them. In a week the amount of morphia injected is reduced from sixteen grains to four or five grains daily. The amount is usually increased gradually by the necessities of the patient up to twelve, fourteen or sixteen grains, and reduced as above. The bowels never move without an enema. When the injection is delayed for a half hour beyond its usual time, the patient has severe pain and soon becomes rigid. From June 14, 1870, to December 31, 1871, eighteen and one half months, there have been injected six ounces of sulphate of morphia. This is a less amount than for any equal period of time since the injections were begun. For a long time, eight grains were injected daily, and there was another long period, during which twelve grains were injected daily, and still a third, during which sixteen grains were injected daily. It seems that eight grains would be a low average of the amount injected daily. If we take eight grains for the average daily injection, this lady has used, subcutaneously, in the last four years, at least twenty-four ounces of sulphate of morphia. At this time, after consuming such an enormous quantity, she is in better health than at any other time for the last four years. She has no desire for opium, would gladly leave off its use, and has made repeated attempts to do so, but, without success.

Mrs. II. shows none of the injurious effects of opium, as laid down by writers. The constipation may be ascribed to her confinement to a warm room.

Selected Papers.

THE DIAGNOSIS OF THE FIRST STAGE OF CARCINOMA COLLI UTERI, WITH REMARKS UPON ITS ANATOMY AND TREATMENT.

By Prof. OTTO SPIEGELBERG, of Breslau. Translated for the Journal by LEONARD WHEELER, M.D., Student in Breslau.

THE recognition of the local commencement of cancer of the cervix uteri is, as is well known attended with difficulty, is indeed, so far as absolute certainty is concerned, regarded as impossible, especially in those cases in which the disease does not in the beginning display itself in the form of superficial growths, but rather as a circumscribed infiltration, the mucous membranes remaining intact. "Of all forms of cancer of the cervix uteri, the only ones which offer any difficulty in diagnosis are those in which the mucous membrane remains intact, or perhaps better said, only that stage of so-called cancer offers any difficulty in which disintegration has not yet appeared. In these cases, however, the difficulties are, for the most part, so considerable that a definite diagnosis can but seldom be made. Where one or more hard nodules can be felt lying under the smooth mucous covering, the diagnosis is comparatively simple and easy; but in those cases, on the contrary, in which the vaginal portion feels enlarged, smooth, hard and thickly swelled, it is impossible to distinguish cancer from simple benignant hypertrophy or from chronic metritis. Let the differential diagnosis tables as laid down in various textbooks be ever so clear and seductive, the fact still remains that in such cases in practice one is always doubtful and uncertain, even if he does leave the whole matter to the untrustworthy decision of the so-called *tactus eruditus*. It is of the utmost importance as regards the treatment, that we should recognize just these cases, in the large majority of which, so far as we can judge, a part of the vaginal portion remains healthy."* So Gusserow represents the present state of our knowledge in his otherwise excellent "Clinical Lecture on

* Volkmann's Sammlung Clin. Vorträge, No. 18.