

INFLAMMATION OF THE PAROTID GLANDS FOLLOWING OPERATIONS ON THE FEMALE GENITAL ORGANS.

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A CLOSE kinship has long been observed between the sexual organs of adults and the cervical and salivary glands. Salivation often occurs as one of the phenomena of pregnancy. I am now treating in my private hospital two ladies for nerve-exhaustion. One has excessive salivation just before and during menstruation. In the other, who has a congested and tender left ovary, the left parotid gland does not secrete during menstruation, and then the mouth and fauces on that side are dry and painful. The thyroid gland so frequently swells after marriage, or during menstruation and pregnancy, that Meckel regarded it "as a repetition of the uterus in the neck,"¹ a sort of cervical womb. Nor was this kinship overlooked by laymen. The ancients recognized conception by the amplitude of the neck, and the Roman matron cast a fillet around the bride's throat before and after the nuptial night, in order to discover whether marriage had been consummated or not. This same sympathetic relation exists in the lower animals, for I have been informed that some horse-breeders measure the necks of their mares before and after they have been covered, to determine whether the intercourse has been a fruitful one.

The metastasis of mumps to the sexual organs in adults of both sexes is another remarkable evidence of this kinship. In the male the testes become secondarily affected. In the

¹ *Transactions of the American Gynecological Society*, vol. 1, p. 148.

female the breasts, the ovaries, the womb, and the labia are the organs in which the sympathetic transference takes place. But mumps is merely a simple febrile engorgement of the parotid gland, and the febrile congestion, or fluxion, in it, and in the sexual organs to which it has been transferred, usually ends in resolution, very rarely indeed in suppuration. True it is that mumps is a contagious disease, and that a micrococcus has been recently discovered by Ollivier in the saliva,¹ which is eliminated by the kidneys, and which possibly in a measure explains the metastasis of this glandular affection to the testicle; but it fails to explain why the female breast and the ovaries are singled out.

On the other hand, during the later stages of acute specific fevers it is not uncommon to meet with parotid bubo, a septic inflammation of the parotid gland ending very generally in suppuration. This form of parotitis is not deemed sympathetic, but symptomatic—symptomatic of a poison in the blood which has exploded in the parotid glands. Yet I am not sure that an element of sympathy does not exist even in this form of suppurative parotitis, and that the parotid glands are not preferably attacked when the septic fever starts from lesions in the sexual organs. For instance, prolonged cases of puerperal septicemia are liable to suppuration of the parotid glands. Of such cases I have seen several in my own practice and in that of other physicians. Of these, only one recovered. Then, again, in a fatal case of septicemia following a posterior incision of the cervix, which I made some years ago for great dysmenorrhea, the parotid glands suppurated. Further, parotid bubo seems liable to follow ovariectomy whenever sepsis has taken place. Thus, in two hundred cases of ovariectomy performed by Schröder and reported by Morike, five cases of parotid bubo took place, with two deaths.² Out of thirty cases of ovariectomy performed by Slaviansky, one case of septic mumps, or parotid

¹ *Progrès médical*, June 27, 1885.

² *Annales de Gynécologie*, August, 1885, p. 108, from *Zeitschrift für Geburtshilfe und Gynäkologie*, Bd. viii, 1880.

bubo, occurred. The patient recovered after both glands had been lanced.¹ Out of one hundred and fifty-four cases of ovariectomy performed by myself, I have had one of parotid bubo. The history is as follows :

On March 23, 1882, I operated on a greatly emaciated and bedridden woman with an enormous ovarian cyst weighing eighty pounds. She had been tapped twice, the last time about six weeks before, and grave septic symptoms had set in. The operation was altogether a forlorn hope. The pressure of the tumor on her diaphragm was so great that, when turned on her back, she could not breathe, and became cyanosed. She was therefore etherized and operated on while lying on her side. Hardly had the abdominal incision been begun when her pulse failed and a death-like collapse set in. This was met by hypodermic injections of brandy, alcohol, and ether. Several analogous collapses, in which we thought she was dying, occurred during the operation, which was made tedious by universal adhesions—to the liver, intestines, omentum, and to the abdominal and pelvic walls. The left ovary, being healthy, was not removed. Many ligatures were needed for the sundered adhesions, and a drainage-tube was put in. She was almost pulseless when put back to bed, and I expected her to die within an hour. On the next day, to my great surprise, I found her wonderfully well, even lively. For seven days she did fairly well, and the drainage-tube was now removed. On the ninth day there was a slight rise in temperature, and her left parotid gland began to swell. In three or four days it suppurated, and I opened it by a free incision, yet it burst also into the ear. She had all the tokens of a mild septicemia, from which she gave promise to get well ; but her relatives were strict homeopaths, and objected to my medicine. So they took her home, where she died on the thirty-second day from vomiting, as I long afterward learned.

But there is also another kind of reverse metastasis, a sympathetic exchange of disease from below upward—from the sexual organs to the parotid gland—which is not septic,

¹ *Annales de Gynécologie*, August, 1885, p. 108, from *Zeitschrift für Geburtshilfe und Gynäkologie*, Bd. viii, 1880.

and which greatly resembles mumps. Like that disease, the swelling passes away by resolution and does not suppurate, and there are no evidences whatever of septicemia.

My ninetieth case of ovariectomy was a single woman, aged twenty-seven. Two and a half years before I saw her, water collected in the abdominal cavity. This was tapped fourteen times by her physician, but rapidly reaccumulated. I readily recognized within the abdomen a hard tumor floating in the dropsical effusion. It gave the sense of ballottement precisely, and I diagnosticated it, in view of its small size and of the tendency to dropsy, as a carcinoma of the ovary. I operated April 18, 1883, and removed a hard, solid, nodular, papillomatous tumor of the right ovary, which I believed to be malignant; but that diagnosis must be given up, as the patient is still living and well. Recovery was prompt, although on the third day her parotid glands began to swell, and to give pain and to interfere with mastication. There was barely a rise in the temperature—not enough to alarm me on that score, although I was somewhat frightened at first by the belief that the swelling was mumps, and that it might do mischief by metastasis.

This case and another one, the notes of which have been mislaid, I reported to the Philadelphia Obstetrical Society (*American Journal of Obstetrics*, July, 1883, p. 745) as cases of mumps after ovariectomy. At this meeting one of the gentlemen present asked me how I could decide off-hand between mumps and septic parotitis. My reply was, "The pulse does not become so frequent as in septicemia, and the eye remains clear and does not acquire that glassy appearance so indicative of a fatal issue." I might also have added that all the symptoms of septicemia were absent. In each of these cases the patient convalesced *pari passu* with the increase in the size of the parotid glands. This false mumps lasted longer than the true variety, but it finally disappeared by resolution, leaving the patient none the worse.

My third case occurred in a married lady aged twenty-one, who had been an invalid for several years and bedridden for six months. She had lost much flesh, and was always groan-

ing from a pain in the left ovary, unless she was under the influence of large doses of morphia amounting to one grain and a half, administered hypodermically three or four times daily. The pelvic regions were so hyperesthetic that it was with great difficulty that any kind of examination could be made, but the left ovary was discovered to be enlarged and very painful. Oöphorectomy was decided upon, and, on September 17, 1884, both ovaries were removed. The left one was found to be hypertrophied and undergoing cystic degeneration, but the right one appeared to the eye so sound that in its removal I was glad to have the backing of Dr. W. S. Playfair, of London, who was present at the operation. I was afraid to leave it, for I believe that, in most cases needing oöphorectomy, failure is the result unless both ovaries are removed and the menopause established. Convalescence was retarded by great and painful swelling of both parotid glands; the right one began to be affected on the fourth day after the operation, the left one a few days later. The two glands developed without any marked rise in the temperature and without acceleration of pulse, and declined without suppuration. There was not present the slightest evidence of septicemia. They behaved exactly like mumps, excepting that they ran a much longer course than mumps ordinarily does. The family physician was very much alarmed by this implication of the parotid glands, but I was so well satisfied, from past experience and from the mild symptoms present, that I unhesitatingly gave a favorable prognosis, assuring him that the complication was sympathetic and not symptomatic. Since the operation she has had a bitter struggle to give up the opium habit, but, under the judicious care of Dr. J. B. Mattison, of Brooklyn, she became well.

This being my third case of pseudo-mumps following the removal of the ovaries, it made a great impression on me. I felt satisfied that it meant something, and that the parotitis was not a mere coincidence, but that some mysterious relationship existed between the sexual apparatus and the parotid glands. As such I reported it to the Obstetrical Society of Philadelphia, at the meeting held October 2, 1884, and made

the following remarks: "Not one [of the three cases] had ended fatally, and, from the very slight febrile movement, I thought that the complication was not symptomatic—as in blood-poisoning—but sympathetic; and that a strong kinship, recognized by laymen, existed between the sexual organs and the cervical glands."¹

Very recently Dr. Matweff, of St. Petersburg, has confirmed my observations in an article entitled "Inflammation of the Parotid Gland after Ovariectomy."² But six of the seven cases which he reports are those of parotid bubo, the glands having suppurated with two fatal results. In it, however, he refers to a case of Dr. Pawloff, in which both glands were affected, but recovery took place without suppuration.

It appears also that Angus Macdonald has had his attention turned in the same direction by having two cases of inflammation of the parotid gland in a limited number of ovariectomies.³ "In neither of these cases," he remarks, "was there temperature or other symptoms to lend the least color to the opinion that the parotid inflammation was septic. In neither case did the glands suppurate. The parotitis merely complicated the convalescence a little by the pain and concomitant slight degree of fever it induced. The fever never ran over 101°." He refers to another case, one by Küster,⁴ in which swelling of the parotid glands followed the removal of an ovarian cyst after it had burst. Besides his own two cases, this one appears to be the only one of which Dr. Macdonald had any knowledge. He consulted Keith with regard to his experience with this complication. The latter had met with it only twice among five hundred operative cases, and "was not inclined to regard the connection as otherwise than what might be expected to happen in a similar number of surgical operations." One of Keith's cases was evidently a parotid bubo of septic origin. Macdonald, however, looks

¹ *The Medical News*, October 25, 1884, p. 469.

² *Annales de Gynécologie*, August, 1885, p. 105.

³ *Edinburgh Medical Journal*, May, 1885, p. 1022.

⁴ *Centralblatt für Gynäkologie*, No. 47, 1884.

upon "these parotitic inflammations as worthy of being noted, as they fall in with well-known facts in connection with reverse sympathy," and that "it is not too much to expect that the sympathetic chain could work backward, and that the irritation of the ovarian nerves should produce inflammation of the parotid."

To the belief that a kinship of sympathy exists between the parotid glands and the adult sexual apparatus I am still further inclined by a late experience. On May 5th of this year I operated on a bad laceration of the cervix. After I had left the house a hemorrhage started, and, before my son, Dr. W. Constantine Goodell, could reach the house, the lady lost a great deal of blood. She was much weakened by it, and her convalescence was accordingly slow, but no trace of fever showed itself. In the second week, first one and then the other parotid gland began to puff. The submaxillary glands also became tender and swollen. For nigh two weeks she was unable to masticate solid food, and she had to be fed on fluids. She was greatly alarmed, and when the glandular inflammation left her—as it did by resolution—a hysterical trismus took its place, which lasted for some time.

I give these facts for what they are worth. To my mind they are more than mere coincidences, and I should, therefore, like to hear from the members present their experience on this point.

DISCUSSION.

DR. R. STANSBURY SUTTON, of Pittsburg.—I thank Dr. Goodell with all my heart for the introduction of this paper, for the reason that in a list of twelve ovariectomies in my private hospital, completed about the first of last July, I lost one patient, who died of a complication referred to in this paper. I was unfortunate in that I lost my case, although there was no suppuration of the glands. It was operated upon in the presence of Dr. Joseph Taber Johnson, who was passing through Pittsburg on his way to the Chicago meeting last autumn, and the patient did very well for some time; not a drop of pus was

seen. But, about the time I concluded she would need no further care, signs of inflammation made their appearance in one parotid gland, which began to swell, and at the end of a week the other gland began to swell; the patient had a temperature of 99.5° Fahr. in the morning; 101.5 was the highest attained in the evening. About the tenth day, or in the second week, rose-colored spots appeared on the chest and abdomen, and one or two upon the arm; she had slight diarrhea, but no tympanites nor soreness. About the beginning of the third week, or in the third week, she suddenly became worse. The gland which was first swollen began to reduce in size; the other did not increase in size. The temperature went up, the pulse increased in frequency, and the patient died. I thought this was a case of septicemia, although I must say that two of my professional brethren pronounced it a well-marked case of typhoid fever. No autopsy was permitted, but I believe that this woman died of septicemia. I had intrusted the preparation of the sponges to a nurse, who was as careful as a nurse could be. I did not intrust a nurse with the preparation of sponges again; after this we had no trouble. Where the poison got into the patient I do not know, unless there was some defect in the preparation of the sponges. Here was a case in which the patient died and the glands did not suppurate.

DR. JOSEPH TABER JOHNSON, of Washington.—Dr. Goodell speaks of three cases of inflammation of the parotid gland occurring in one hundred and fifty-three ovariectomies. I had one of these cases following my first operation for the removal of an ovarian tumor, weighing fifteen pounds, from a patient sixty-five years of age, in whom the menopause had occurred fifteen years previously. The operation was a perfectly simple one, there being no adhesions. The incision was but three inches long, the sac was removed without the slightest difficulty, and the case bid fair to be successful. About the third or fourth day after the operation inflammation of the parotid glands began to develop. She had the rose-colored spots referred to by Dr. Sutton, and they were so well marked on the face that the case looked like one of facial erysipelas; and, as she had the history of recurring facial erysipelas for several years, we were inclined at first to this diagnosis. It was

thought, however, later on, that it was not a case of erysipelas, but a case of metastatic inflammation of the parotid glands. Without other symptoms to account for death, the patient gradually sank and died on the sixth day. The highest temperature reached was 102.5° Fahr. She had the glassy expression of the eye usually present in septicemia, and finally slight coma with strabismus. At the autopsy there was no evidence discovered in the abdominal cavity to explain the death of the patient. No peritonitis existed except a very trifling amount about the edges of the abdominal incision. The occurrence of this condition, described by Dr. Goodell, would possibly explain the death of my patient.

DR. T. A. EMMET, of New York.—I would add to the list two cases, one occurring after operation for laceration of the cervix, and the other after closing a most insignificant vesico-vaginal fistula in which the patient died, the only case I have known of death after the operation for vesico-vaginal fistula. I have not seen the condition after ovariectomy.

DR. M. D. MANN, of Buffalo.—I wish to put on record three cases of this complication. One occurred in the practice of Dr. T. G. Thomas, while I was a hospital interne. There was distinct septicemia following ovariectomy. The patient died before suppuration took place.

The second case occurred in my own practice. I removed both ovaries and the uterus. The patient made a good recovery, but all at once alarmed me by developing a large swelling in one parotid gland about the end of the first week.

The third case occurred in the Buffalo General Hospital, in the practice of Dr. E. M. Moore, in a boy who was shot or stabbed in the abdomen, and enlargement of the parotid glands followed. This patient also made a good recovery. I have looked upon it, therefore, from this experience, as a complication which might follow abdominal wounds rather than wounds which can be referred distinctly to the sexual organs.

DR. W. H. BAKER, of Boston.—I would add one case occurring after Tait's operation, in which there was suppuration of the left parotid gland that delayed recovery, but otherwise the patient did very well. I regarded it as a case of septic origin.

DR. THADDEUS A. REAMY, of Cincinnati.—I have seen two cases of inflammation of the parotid glands after operations. The first was after Tait's operation, in which the patient died, but the glands did not suppurate. In this case both glands were enlarged, and the patient died on the seventh day after the operation. I attributed it to septicemia. There was considerable elevation of temperature.

I have had another case, occurring in a woman fifty-four years of age, where I made supra-vaginal hysterectomy for removal of a fibro-cystic tumor of the uterus. Both ovaries and tubes were also removed. The patient after a long time recovered. The left parotid gland was very much enlarged, although suppuration did not occur. The enlargement took place on the fifth or sixth day, and I attributed it at the time to septicemia, but it is possible that it was not.

DR. GOODELL.—We all know that this complication may follow any severe surgical operation, and also that it may occur after prolonged diseases, especially the exanthematous ones, such as typhoid fever, scarlet fever, etc. But I think that the point made in my paper has been sustained by the cases reported in the discussion—viz., that, while parotid bubo may occur after ordinary surgical operations, it is more liable to happen after operations upon the sexual organs. Further, I can not help believing that sometimes the parotid inflammation is wholly independent of blood-poisoning, and that in these sympathetic cases the temperature does not rise, the pulse does not beat faster, the gland does not suppurate, and the life of the woman is not jeopardized.