

such a condition is a difficult task. None but an expert can do so, and they are frequently mistaken in diagnosis.

Most gynecologists that favor hysterectomy advise to curette and tampon uterus, and if the patient does not improve or grows worse then remove the uterus.

If this is a correct guide as to the indications for hysterectomy, then it is not a question of diagnosis, but failure in a certain line of treatment to give relief that demands the sacrifice of the uterus. In severe cases of septic infection to curette and tampon the uterus, then perform hysterectomy, the death-rate would be so high as to condemn the operation and many lives would be lost that could be saved by less heroic means.

To be more explicit, I will deviate from the title of this paper and enter briefly into the pathology and treatment of puerperal infection.

It is of two general varieties, viz.: 1. Putrid infection or sapremia. 2. Septic infection or septicemia.

The first is a local infection due to decomposition of the uterine contents by putrefactive bacteria only without migration of the bacilli, not contagious, non-progressive by invasion, due to absorption of ptomaines not inoculable.

In sapremia, putrid infection, remove the putrid material from the uterine cavity, irrigate, disinfect, drain, and 99 per cent. of cases will recover. Hysterectomy would relieve these cases, but it would be criminal to sacrifice the generative organs when such cases can be treated more successfully and with fewer deaths by less heroic measures.

The second class is due to germ development, their rapid migration and invasion of new tissue even entering the general circulation; if at first local it soon becomes constitutional, highly infectious, and inoculable from case to case. The contagious principle is destroyed by boiling, putrefaction and germicides.

In the treatment of septic infection we have a more difficult problem to solve.

The septic germs soon extend beyond the endometrium, invading its muscular structures, the lymphatics, the blood vessels, etc., and can not be removed by ordinary surgical measures, and it is very doubtful if hysterectomy could completely remove the infected tissues in severe cases.

In putrid infection the curette and tampon might relieve the patient, but in septic infection I do not believe such treatment is advisable, except it might be within one or two days after labor, where placental tissue has been left in the uterine cavity.

It is drainage and elimination we desire in these cases, not obstruction. What surgeon of repute would tampon an abscess cavity through a very small opening without using a drainage-tube, letting the gauze remain two, three or four days, especially when there is a broken down tissue, débris and septic germs present in abundance.

After delivery nature establishes a process of elimination by a current flowing from the uterine cavity, the uterus and vagina being the main trunks of a sewer; the lymphatics, blood vessels, and uterine sinuses, its tributaries, obstruct the main channel, and what is the result? Who could think of filling the trunk sewer of a city with gauze and expect free drainage, even if done antiseptically after scraping out and flushing it? Yet we are advised to curette the uterus and fill it with gauze, damming up nature's channel of elimination, thus preventing the throwing

off of effete material from the placental site, endometrium and lymphatics—obstructing the egress and retaining the phagocytes laden with germs and toxins, completely annulling phagocytosis, producing the very condition we should endeavor to prevent. Some will say only tampon after a thorough curetting; so much the worse, you have broken down and destroyed nature's barrier, opened up new surfaces for absorption, and favor that absorption by obstructing nature's method of elimination. I regret to say it, but it is my conviction that the curette and tampon indiscriminately used kill more patients than they save in septic infection.

Their indiscriminate usage manufactures cases for hysterectomy. In the treatment of these cases imitate nature as far as possible and establish a current of free drainage.

If any foreign substance is in uterus remove it with the forceps, wounding endometrium as little as possible; irrigate the uterine cavity thoroughly with an antiseptic solution and introduce as large-sized rubber drainage-tube as the os will admit. Repeat irrigations and cleansing of the drainage-tube at least once or twice in twenty-four hours. Do not neglect occasional use of salines and calomel if needed, with systematic use of quinin, strychnin, tonics, and good nourishing diet. Quinin certainly has a specific action in these cases in checking germ development and controlling the chills which accompany these cases. I venture to say that where this line of treatment is properly carried out it will save more lives than the combined use of the curette, tampon, and hysterectomy. While I have in a great measure condemned hysterectomy in puerperal infection, I admit it has a limited field of usefulness in septic metritis, multiple abscesses in the uterine wall, thrombophlebitis, if it were possible for us to be positive in our diagnosis, but if in doubt I prefer drainage.

Unless future operative work gives better results, even this limited justification of hysterectomy may be abandoned.

In the above collection of cases I am satisfied, if the operation be limited strictly to severe cases of *septic infection*, rapidly progressive and not in its secondary results, the death rate would be 80 or 90 per cent. of cases operated upon. Even a death rate of 50 per cent. is sufficient to condemn the operation. The proper use of the drainage-tube will not only save more lives, but the uterus, tubes and ovaries will be preserved for future usefulness and the surgeon's conscience left more at ease.

CÆSAREAN SECTION TWICE IN ONE PERSON.

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August 3, 1893, I was called to see Mrs. P., aged 30 years, in her fourth pregnancy, there having been previously one abortion. I had performed craniotomy in two preceding labors on account of so great contraction of the pelvis that it was impossible for the child to be delivered, as the conjugate diameter was less than two and one-half inches.

It was difficult to assume the responsibility of the operation owing to opposition to it by elder members of the profession, as indeed it has been one of the most hazardous operations known until within the light of aseptic surgery.

Dr. Harris collected with great industry 153 operations performed by the older methods in the United States, 56 of which, or 37.5 per cent, ended in recovery; under this showing it will be seen that more than one-half of the cases proved fatal.

Baudon, writing in 1873, said, in Paris there had not been one successful case in 80 years, though the operation had been performed on perhaps as many as 50 women. I believe the responsibility for these results to be due to septic infection in the first place, and second, the postponement of the operation until death impended. I believe the surgeon is, in the majority of cases, responsible for the death of the patient when due to sepsis; and further, when the dressing is complete no inexperienced nurse should have anything to do with the case.

However, I decided not to destroy this the fourth child, and the mother consenting to the operation I called as assistants Drs. Sweet and Bryant. I operated on August 4, 1893. On the evening of the third I gave a cathartic and moved the bowels thoroughly, and emptied the bladder prior to the operation; every antiseptic detail was carried out with cleansing and disinfecting the patient's abdominal surface and vagina. In all the steps of the operation the most rigorous precaution was observed. Morphia and belladonna with nux vomica were given to sustain the nerve centers during anesthesia by chloroform.

After the patient was under full anesthesia I made an incision to the peritoneum through the abdominal wall in the median line from four inches above the umbilicus to within two inches of the pubis. The peritoneum was opened on a grooved director with scissors, and the uterus lifted bodily outside the abdominal cavity and wrapped in hot antiseptic towels, the upper part of the wound was temporarily closed with silver sutures to restrain the abdominal contents; a broad, flat sponge was wrung out of hot bichlorid solution and placed posterior to the uterus over the abdominal incision for further safety; a rubber ligature was passed around the neck of the uterus to prevent hemorrhage. An incision four inches long into the uterus and penetrating to the sack was then made to prevent the escape of the amniotic fluid into the cavity of the abdomen. The child was removed from its lair with membranes intact, which were then ruptured and placenta removed; no vessels of any size were severed. The rubber ligature was taken off, uterus washed out with disinfectant fluid and the uterine incision powdered with iodoform. The edges of the wound of the uterus were brought together with deep interrupted sutures of catgut about one-half inch apart, made with a curved needle one-quarter inch from the edge of the incision through the muscular tissue of the uterus, but not including the mucous membrane. Sutures were tied firmly, but not so tight as to strangle the enclosed tissue. For the purpose of approximating still more the edges of the incision, a set of superficial stitches of silkworm gut were inserted between the other stitches about one-quarter the thickness of the uterine walls.

Careful inspection was made of the abdominal cavity, and we concluded not to irrigate because no blood or other septic material was found within the abdomen. The peritoneum was united with continuous sutures of silkworm gut; the abdominal walls were next coaptated with interrupted sutures of silk, the whole wound being dressed with iodoform gauze and absorbent cotton.

Within an hour the mother conversed joyously over a living babe, and myself and assistants were no less pleased than the brave mother. The next day her temperature was normal and but for slight vomiting from the anesthetic the patient was tranquil. On the third day after the operation, she had a little fever for the first, owing to secretion of milk; the temperature of 100 lasted one day. On the fourth day, temperature normal, and she furnished milk for infant, and the mother was anxious for food to appease her own appetite. On the fifth day bowels moved and temperature normal; on the same day dressings were changed, wound completely healed by first intention. On the tenth day of the operation no untoward symptoms. On the twenty-first day of the operation patient walked through the house and felt as well as ever, excepting muscular debility.

During a subsequent pregnancy in the same patient the husband urged a miscarriage to be performed, which I refused absolutely, not feeling justified in destroying a child which the mother desired to save. Under the present advancement in antiseptic surgery, when we have statistics to show that the fatality to the mother in craniotomy is 47 per cent., my answer was in the negative.

I was again called to see this same woman in labor at full term pregnancy on July 27, 1895, and gave morphia to control the pains and prepare her until next day for the second operation. The room had been washed in bichlorid solution, and sulphur fumigations had been used and thorough sprinkling with carbolic acid solution at the time of the operation, and the patient had attended to antiseptic baths and vaginal douches, and her system had been fortified by tonics. I was assisted in the operation by Drs. Sweet, Salts and Davis, with my wife as special nurse. The patient was anesthetized at 11 A.M., having first taken nux vomica and morphia. Only about 1 ounce of Squibb's chloroform was inhaled during the entire operation, which lasted fifty minutes. This time the case was somewhat complicated by reason of the placenta being attached near and over the os uteri, as in a case of placenta previa. I cut through the former cicatrix and found the wall of the uterus to be extremely thin. The rubber ligature was tightened, the child turned, to save time membranes were ruptured, child removed and turned over to Dr. Salts. Placenta quickly removed with all adherent portions of the decidua carefully separated. Ligature was loosened and uterus washed out with a disinfectant fluid through vagina. Hypodermic injections of ergot and strychnia were given. The uterine cavity and edges of wound were powdered with iodoform, after first being sponged nearly dry, and sutures and all subsequent details finished as above related in the first operation. The patient did not lose more than an ounce of blood at most; neither had I to ligate nor use torsion on any vessels. Her temperature never rose but one degree above normal after this the second operation, and that on the third day at the appearance of the milk; after that no rise of temperature and she furnished plenty of food for the child. On the fourth day the dressing was changed and found no irritation, wound completely healed by first intention. We irrigated the uterus twice a day as in the first operation for the first five days afterward, with a reflux catheter and a bichlorid solution, and the next five days once a day with warm solution of boracic acid. Finding no discharges after this the tenth day, we abandoned all further uterine

interference, believing that organ to be in a healthy condition which I think was owing to the antiseptic injections during and after the operation especially. She rode out five miles on the twenty-first day after the operation.

My judgment in the matter is, the Cæsarean operation is a superior one and should be generally performed when the child can not be born alive in any other way. The girl, two years old, after the first operation, and the boy after the second one, with the delighted mother, live and thus add a further triumph to the success of antiseptic abdominal surgery.

THE VALUE OF DIFFERENTIAL DIAGNOSIS IN DENTISTRY.

Read in the Section on Dental and Oral Surgery, at the Forty-sixth Annual Meeting of the American Medical Association, at Baltimore, Md., May 7-10, 1895.

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The subject of diagnosis is one of much importance to a practitioner, and the man who can diagnose rapidly and correctly is usually successful in his profession. In medical works great importance is laid on diagnosis even to such a degree that special works are written on the subject. Who does not remember the differential tables in nervous, respiratory and cardiac diseases, and the dread they inspired at examinations? Without their aid we are not able to diagnose our cases, and hence the urgency of requiring students to learn them. I have constantly been surprised at the difficulties which students encounter in dental surgery and pathology. Even a well-read student finds it hard to bring his knowledge to bear promptly and efficiently upon the patient before him. The recognition of the several symptoms which the student has learned from lectures or reading can be best directed by the teacher at the side of the operating chair, just as it is at the bedside in medicine; but in his absence it is not always easy for the student to get a clue to the nature of the case before him. Every member of the dental profession can recall the days of his service in the operating room, and remember his difficulty in procuring help from the professor or his assistant, for as a rule, the corps of instructors in our colleges, medical and dental, is much too small to allow more than a passing glance or word to any inquiring student, and he does the best he can. Whether this is a wise plan or not is a subject for discussion, for several reasons. First and foremost, the student is incapable, in the majority of cases, of understanding the treatment of his earlier cases. Again, the patient, even a charity case, under these conditions is entitled to good judgment in his diagnosis, though willing to submit to the student operator; his position demands the supervision of a chief, not only for the care and result of the operation, but for the welfare and regard of the institution in which the operation was held. It is not always a patient's fault that he is a public case, and indeed we, as a class of students, graduates or undergraduates, must remember it is through their misfortune we obtain our practical experience, and so ought to give every care and attention to do the best we can for the "subjects of the clinics." The larger the clinics, the more benefit we may derive from them. The larger the corps of capable demonstrators under the guidance of an experienced diagnostician as "chief," the more practical and successful professional men and women we become.

It is evident that before any one can successfully treat a disease, he must be acquainted with its nature and the symptoms it produces. For instance, before prescribing for a patient suffering from pain in the head, he must ascertain from what that pain arises. It may result from a carious tooth, when treatment or extraction will give relief; or from periostitis, when potassium iodid will be beneficial; or from constipation, for which only a purgative is required; or again, it may be symptomatic of an incurable disease of the brain, which might be aggravated by many of the remedies well fitted for the cure of a less formidable disorder.

Diagnosis is the science which teaches us thus to distinguish one disease from another, and to trace symptoms to the causes from which they spring. Now diagnosis is valuable not only for treatment, but it enables you to form an accurate opinion as to the future course of a disease. For example, two persons may complain of palpitation of the heart; in the one you may be able to prove that the organ is healthy in its structure, but unduly excited by disordered digestion; in the other, you may find it affected with an incurable disease that may at any moment terminate your patient's life. It seems a curious fact that works on dental surgery are so very imperfect and rambling on the subject of diagnosis. I doubt if any branch of medicine is so poor in this respect. And although the dental section may be given grace on account of its late arrival, still it is a matter of regret that our text-books should be so much behind, and research so slow in progress, that is slow in availing itself of so many new facts introduced from science generally. What is the reason? I am afraid it lies in five sources:

1. The hurry to obtain a diploma.
2. The study of *only just* what seems absolutely necessary in the practice of dentistry, and a corresponding inability to apply general principles.
3. The fear of encroaching on general medicine.
4. Insufficient preliminary *education*.
5. Lack of a thorough knowledge of the *normal conditions*; and a habit of relying too much upon one mode of treatment.

Diseases are distinguished from each other by such alterations in the organs themselves or in their secretions as can be ascertained by the senses of the observer (physical signs); or by changes in the functions of the parts affected (symptoms). The physical signs are least liable to misconception, inasmuch as we are independent of any suggestion on the part of the patient. Thus when we see a carious tooth or an exposed pulp, or a swelling we know that there must be some abnormal condition of the part. Physical signs can not be exclusively relied upon for the formation of a diagnosis; the symptoms and history of the case must also be taken into consideration. It is generally difficult for a student to guide a patient's account of his complaint in such a way as to derive the necessary information from it. Most persons ramble in describing symptoms, and insist in many cases on giving their own or other person's opinions as to the nature of their disease, instead of confining themselves to a narration of facts. The only way to overcome this is by conducting your examination in a systematic manner, and by having a definite aim in every question you ask. Students are apt to suppose that some particular sign or symptom is sufficient to indicate each disease. Unfortunately, this is not the