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**ORIGINAL COMMUNICATIONS.**

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AN APPRECIATION OF THE WORK OF DR. HENRY  
J. GARRIGUES IN INTRODUCING ASEPSIS  
INTO OBSTETRIC PRACTISE.\*

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Mr. President and Fellows of the American Gynecological Society:

It is with the greatest diffidence and the greatest pleasure that I rise to speak before you to-day. Diffidence because of my unworthiness of the honor and pleasure that I may help to keep bright the laurel that gleams above a brow frosted and seamed by the snows of more than seventy winters.

In order that you may realize how great a thing was done when sepsis was driven by Garrigues from the New York Maternity Hospital in 1883, let me remind you that it is less in measure of years than the years of a strong man's life since Oliver Wendell Holmes, in his immortal essay on puerperal fever, said so bravely: "The time has come when the existence of a private pestilence

\*An oration delivered before the American Gynecological Society at Washington, May 8, 1907.

in the sphere of a single physician should be looked upon not as a misfortune, but a crime." Five years later Ignatz Semmelweis, a young assistant at the Vienna Maternity, was derided because he persistently held that every case of puerperal fever was caused by the absorption of putrid animal material.

These assertions of Holmes and Semmelweis marked the first gray gleaming of a dawn that, obscured then by the clouds of derision and apathy and the mists of imperfect knowledge, has gone on to the clear light of a glorious day. Now we know that puerperal fever is puerperal septic infection; we know how to prevent it, and we cannot shift the responsibility.

At the time of the epidemic at the New York Maternity conditions were different. The significance of the part played by the various bacteria was only beginning to be appreciated. It is true that Playfair in the fourth edition of his "Midwifery," issued in 1882, included all postpartum fevers under the head of puerperal septicemia; yet, he admitted, "there were facts difficult to reconcile with theory and for which we were unable to give a satisfactory explanation."

Gusserow, in the same year, in commenting on the factors influencing the mortality at the Maternity of the Charity Hospital in Berlin, admits that *locality* has not the absolute importance it was formerly supposed to have and that Semmelweis was correct in defining puerperal fever as a wound infection. Thomas More Madden, at the meeting of the British Medical Association in August, 1883, held that it did not matter by what term we distinguish the malady, provided we recognize that there is "a specific infectious disease consequent on parturition" and that it is largely modified by the intensity of the septicemic condition, by the previous condition of the patient, and by the prevailing epidemic constitution of the atmosphere. He holds that large maternity hospitals would be desirable if they were only safe, but that in all hospitals where a number of women are confined together a "specific puerperal atmosphere" is necessarily created.

Kinhead, Professor of Obstetrics at the University of Dublin, taught that "such fever, from whatever sources arising, except septicemia, is a specific infectious disease," and that "it occurs epidemically and sporadically, like any other infectious disease."

In the winter of 1883-84, partly because of the dreadful conditions prevailing at the New York Maternity, the subject of

puerperal fever was prominently before the profession. In a somewhat heated discussion before the New York Academy of Medicine in December of 1883 T. G. Thomas defined puerperal fever as "an infectious disease due, as a rule, to septic inoculation of wounds in the genital tract." He held that some toxic agent existed, but would not admit that the "round micrococci" could be important factors in its etiology. Polk thought Thomas should have planted himself squarely upon the view which regards puerperal fever as identical with septicemia. At a later meeting For-  
dyce Barker, who still clung to the old dogma of a specific disease, ridiculed these ideas. "Does every parturient women," he asks, "in performing the function of maternity, like the scorpion that carries in its tail an agent for suicide if death be threatened by fire, physiologically generate an equally fatal poison in a corresponding locality?" If so, it seems to him evident that "the state should make childbearing a penal offense for families that did not have means enough to carry out elaborate antiseptic requirements."

It is seen by these references that while the bulk of the profession held more or less to the idea of a septic poison, there was much concerning the exact nature of this poison that was vague, for the science of bacteriology was yet young and the old idea of a specific puerperal fever was hard to kill. Stadfeld, at the Copenhagen Maternity, had used carbolic acid as a disinfectant in his wards since 1870 and similar measures were employed by most obstetricians. These early efforts, however, were but gropings toward the light and were only moderately successful. Outbreaks of puerperal fever still frequently occurred and there were still those who believed in the "epidemic influence of the

But the time and the opportunity were waiting for him who should have the clear insight and the courage to put aside the ancient dogmas of the established order and to replace them by the new ideals of surgical cleanliness.

In 1881 the mortality at the New York Maternity Hospital was thought to be very low, as it was only 2.36 per cent. In 1882 it had risen to 3.25 per cent. In the first nine months of 1883, with 345 deliveries, 30 women died and the serious morbidity was enormous. In September the conditions were at their worst. Ten of the women delivered during the month died, about one in four, and the survivors escaped miserably with their lives.

At this time (October 1) the rotation of service brought Dr. Henry J. Garrigues again in charge. In the fullness of maturity, energetic, thoughtful, calm, he proved to be the man superior to the emergency. Appalled at the frightful conditions, he had already formulated and at once carried into effect a detailed plan for driving out the pestilence. This plan was original in its detail, showed a broad comprehension of the principles of asepsis, was brilliant in its achievement, and of far-reaching influence on the practice of obstetrics. In brief it was this:

Rapid alternation of wards was secured, so as to allow frequent fumigation with sulphur, followed by scrubbing with soap and water and by a 1-1000 bichloride solution. Fresh bedding was furnished at each change. The floors were sprinkled four times daily with the bichloride solution. All visitors were rigorously excluded. Doctors and nurses employed in the maternity were not allowed to enter the other hospital wards or the dead house. The patient had a bath and clean linen beforehand and on entry to the delivery room the abdomen, genital region, buttocks, and thighs were washed with soap and water and then with bichloride solution. The vagina was irrigated with two quarts of the solution from a glass fountain syringe with glass nozzle. The rubber sheet on the delivery bed was frequently renewed and washed before each delivery with a 1-1000 solution.

No vaginal examination was allowed except after the hands had been thoroughly scrubbed with soap, hot water and a stiff brush and soaked in a hot 1-1000 bichloride solution.

When the head appeared at the vulva a piece of gauze soaked in the bichloride solution was applied and kept there. After the expulsion of the child the genitals were kept covered by a similar compress. The placenta was expressed by Credé's method so that it might not be necessary to introduce the finger inside the vulva. If it was necessary to introduce the finger to remove placenta or membrane the vagina was washed out, otherwise not.

Intrauterine injections were used only when the hand or instruments were introduced into the cavity of the uterus, or after the birth of a macerated child. After the expulsion of the placenta the vulva and adjacent parts were washed out with the solution and the vulva covered with a large gauze compress wet with the solution. Before each washing the nurses disinfected their hands as before labor. No vaginal injections were used ex-

cept in fetid lochia. Every substance brought in contact with the genitals was soaked beforehand in the solution.

There are some of you who may remember the ridicule or skepticism that greeted the announcement of these measures; there are many more of you who remember how the pestilence gathered its terrors to itself and fled away in a night—and it has never returned.

On December 21, less than three months later, Garrigues, in reporting the result of his work, was able to say: "The effect of the treatment has been wonderful. As if by magic all trouble disappeared. Ninety-seven women have been delivered since its introduction and not only has none of them died, but there has scarcely been any disease among them—only three had any rise of temperature. The pavilions are scarcely recognizable. Where we used to have offensive odors, feverish, prostrated, or despairing patients, overworked nurses, and despondent doctors, the air is pure, the patients look well, their temperatures are normal, the nurses are cheerful, and the doctors happy."

Could there be a greater triumph than this? Was ever greater lesson taught more quietly? What battle of the greatest general of the world's red fields was ever fraught with consequences more momentous?

The lesson was taught to the world, and the world has heeded it well, for even to-day we acknowledge its influence. "Peace hath its victories far more than war," yet we do not beat the drums when lives are saved, or sound the bugles when disease is made to flee. The world has ever held him the hero who has led victorious armies in triumph across fields strewn with dead and dying men. Is he less worthy to be called a hero who has led victorious against the legions of death?

Garrigues, the man who saved and taught us how to save the mothers of men, lives to know we know the value of his deed; lives to know the place of honor he holds in the hearts of his fellows; lives in the pulsing blood of happy wives and mothers, and has an immortality in thousands yet unborn.



### Brooks Hughes Wells (1859-1917)

- M.D. Coll Phys Surgeons (Columbia, NYC) 1884
- Prof GYN NY Post-Gradate Med School and Hospital
- Editor Am J Obs Dis Women & Children



### Henry Jacques Garrigues (1831-1913)

- Born Copenhagen
- M.D. U Copenhagen 1869
- Moved to NYC 1875
- Obstetric surgeon to NY Maternity Hospital
- Prof Obstetrics NY Post-Graduate School
- Best known for introduction of antiseptics in Obstetrics

PRACTICAL GUIDE  
— IN —  
ANTISEPTIC MIDWIFERY

IN HOSPITALS AND PRIVATE PRACTICE.

— BY —

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1886.  
GEORGE S. DAVIS,  
DETROIT, MICH.