

Valedictory Address

ON

ANTISEPTIC MIDWIFERY.

*Delivered before the British Gynaecological Society on
Jan. 14th, 1897,*BY CLEMENT GODSON, M.D. ABERD.,
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LONDON LYING-IN HOSPITAL.

GENTLEMEN,—It has been customary at this meeting of the Society for the outgoing President to deliver a valedictory or farewell address, and the subject not infrequently taken has been a review of the work done by the Society during the past year. Your last two Presidents, Professor Savage and Mr. Jessett adopted this plan, and last January in my address—not a valedictory one, however, owing to your having paid me the compliment of electing me to occupy the chair for a second year—I followed their example. But now, in order not to make this appear an established custom, I am taking a different course. One of your former Presidents, Dr. Grigg, Physician to Queen Charlotte's Lying-in Hospital, at the end of his inaugural address, said "the lateness of the hour prevents my touching upon the question of the influence of antiseptics during parturition. I believe that it will be found that antiseptics have revolutionised the rules of obstetric practice." Another of your past Presidents, Dr. Bantock, quite recently writes¹: "He asks me to explain the marvellous effects of the antiseptic method in midwifery practice; I say they are due to the adoption of the principle of cleanliness, and on the contrary side would call his attention to the large number of deaths due to poisoning by corrosive sublimate which medical literature affords." The opinions of your two past presidents are so at variance with one another, that I thought I could not do better than take up this subject for my address this evening, and give you some account of the City of London Lying-in Hospital, and the results to the patients, which have not yet been published except in the annual reports of the hospital, in order to corroborate the testimony given respecting the General Lying-in Hospital since corrosive sublimate was introduced there as an antiseptic by Sir John Williams and Dr. Champneys in May, 1884, who followed the example which had been set by Dr. Tarnier in the Maternity Hospital in Paris.

It was the publication of the admirable results obtained by the physicians at the General Lying-in Hospital that decided us to discard carbolic acid in favour of corrosive sublimate as our antiseptic, when the City of London Lying-in Hospital was re-opened on July 1st, 1886, after having been closed for a short period for thorough cleansing, as was the annual custom. The strength of the solution used was 1 in 1000 for the hands of the attendants, and 1 in 2000 for vaginal irrigation. I gave a full account of how it was employed in a lecture I delivered at the Midwives' Institute and Trained Nurses' Club on Oct. 14th, 1887, which was subsequently published and distributed among the midwives and nurses in pamphlet form; and, except in small details, it has been used in the same manner up to the present time, Dec. 31st, 1896, just ten and a half years, on 4608 women, without a suspicion of mercurial poisoning in one.² Therefore I think we may at once dismiss the idea of any risk of poisoning in the way in which it is now used, and should be used, and it will probably be found that what Dr. Bantock refers to relates to when intra-uterine injections were employed of a strength of 1 in 1000, or stronger, such as those reported by Dr. Dakin in a paper on Mercurialism in Lying-in Women undergoing Sublimate Irrigation, read at the meeting of the Obstetrical Society of London in December, 1886. Dr. Dakin brought the subject forward not with the view of advocating the discontinuance of its use, but to endeavour to elicit the best means of employing

it with safety, for he says, "the results at the General Lying-in Hospital have been such as to make the physicians loth to dispense with it."

In an admirable address³ by Dr. Cullingworth on "Puerperal Fever a Preventable Disease," he says: "Until the year 1877 this hospital [the General Lying-in Hospital] was scarcely ever free from puerperal fever, and the mortality, always high, occasionally became fearful. In 1838 of 71 women delivered 19 died; in 1861 14 died out of 195; and in 1877 9 out of 63. On several occasions the hospital had to be closed for long periods, and thousands of pounds were spent on the sanitary improvement of the building. In October, 1879, this institution, having been closed for two years, was re-opened, and has since been conducted on antiseptic principles, the details varying from time to time as increased knowledge and experience have dictated. Mark the result," and he gives the following table:—

Period.	Deliveries.	Deaths.	Average death-rate from all causes.
1833 to 1860	5833	180	1 in 32½ = 3·088
1861 to 1877	3773	64	1 „ 58½ = 1·696
1880 to 1887—antiseptic period	2585	16	1 „ 161½ = 0·618

This last period of eight years takes in three varieties of antiseptics used, first carbolic acid, next permanganate of potash, and finally corrosive sublimate. Dr. Boxall, in a masterly paper read at the June and July, 1890, meetings of the Obstetrical Society, (which I recommend to the attention of you all) gives another period, from the time corrosive sublimate alone was used—May 1st, 1884, to June 30th, 1889, 2150 deliveries, 9 deaths, 1 in 239 = 0·418 per cent.—a much greater diminution in the death-rate.

I propose to contrast the results at the City of London Lying-in Hospital from the time that I became connected with it, in March, 1870, up to the end of April, 1886—a period of 16 years—with that commencing July 1st, 1886, when corrosive sublimate as the antiseptic came into use there, up to Dec. 31st, 1896—a period of 10½ years,—and I think you will find that it thoroughly bears out what Dr. Cullingworth has said in his address and what Stadfelt of Copenhagen has expressed, his opinion being emphatically endorsed by Dr. Boxall in his paper to which I have referred,—"the belief that the hygiene of a maternity depends less upon its construction and its age than upon the hygienic principles upon which it is directed and upon the perseverance with which these principles are carried out in the daily practice." For you will learn that while structural alterations failed to improve the condition at the City of London Lying-in Hospital, hygienic principles and, markedly, the employment of corrosive sublimate produced an extraordinary change for the better.

I will say a few words about the hospital itself, and my connexion with it. The present building was erected in the City-road, at the corner of Old-street, in 1771, and was opened for the reception of patients on March 31st, 1773—so that it is 124 years old. There is not now, nor has there ever been, a house surgeon; the chief resident is termed matron and midwife. There is only one medical officer in charge, who resides in the neighbourhood and visits the hospital daily and whenever required. He is termed the surgeon-accoucheur. I took over the duties of this office in March, 1870, though I was not permanently appointed to fill it till the following July. There are two other medical officers, a consulting physician and a consulting surgeon. These are not complimentary honorary appointments as the term "consulting" often implies. The surgeon-accoucheur is expected to call to his aid the consulting physician whenever he is in difficulty in a delivery or in any case of serious illness, and he has the consulting surgeon to appeal to in any case that is surgical outside midwifery and gynaecology. Both these medical officers have a seat on the managing committee. I resigned my appointment of surgeon-accoucheur in 1871, and in 1872 was elected from among the governors a member of the committee of management, the meetings of which I attended as regularly as possible up to July, 1881, when Dr. Greenhalgh resigned his office of

¹ Medical Press and Circular, Nov. 18th, 1896.

² A vaginal douche of 1 in 2000 at a temperature of 115° is given immediately after the delivery of the placenta, and three similar douches subsequently at intervals of night and morning; then iodine douches are given instead of sublimate.

³ Delivered at St. Thomas's Hospital, London, and published by J. & A. Churchill, 1888.

consulting physician, and I was appointed in his place; so that it will be seen that for nearly twenty-seven years I have taken an active part in the affairs of the hospital.

In 1870, when I took over the medical charge, the patients were dying in the proportion of 1 in 19—12 deaths occurring among the 227 women delivered—so that as soon as possible, seconded by Dr. Greenhalgh, I appealed to the committee to close the hospital. Its doors were shut on June 15th for three months in response to our entreaty. I immediately set to work to endeavour to discover the defects and get them rectified as far as possible, and what was done is recorded in the Annual Report for 1870. "Your committee have had the building painted and coloured throughout, have done away with all the old bedsteads, and replaced them with iron ones without curtains. Palliasses and hair mattresses have been provided in the place of the old feather beds, and all other furniture likely to retain infection has been removed. In fact, the wards have been almost entirely re-furnished. Your committee have also had all the drains opened and double trapped at all the gratings and down spouts, and all cesspools filled with concrete. The wards have been thoroughly fumigated with chlorine gas and every means has been used to get rid of all infection." The result was that, from the re-opening on Sept. 21st to the end of the year, 103 women were confined with only one death, reducing the mortality for the whole year to 1 in 25. In 1873 it was 1 in 50, and in 1876 and 1877, the two years taken together, 1 in 45, so that, on Nov. 24th, 1877, the medical officers again appealed to the committee to close the hospital. This was done on Dec. 1st. "It was resolved that Dr. de Chaumont of Netley be requested to inspect the hospital, and report on the ventilation and drainage with a view to their improvement." The result of this was that great alterations were made, at an outlay of upwards of £4,500. The hospital, in its reconstructed form, was re-opened on April 16th, 1879, after having been closed for sixteen months—and with what result? 287 women were delivered during the remainder of the year with only one death. But what a crushing disappointment came next year (1880); twelve deaths among 383 women delivered—one in thirty-two; and eleven of these were in the first half of the year, out of 196 deliveries—one in nineteen. Does not this bear out the opinions I have expressed in the earlier part of my address as to structural improvements.

In the following year, 1881, there was again a large expenditure in this way, nearly £600, and with what result? At a meeting of the committee held on April 28th, 1882, the medical staff reported that the sanitary condition of the hospital was very unsatisfactory and recommended that it be closed at once. The committee then resolved forthwith to act upon the advice of the medical officers, and appointed a sub-committee to inquire into the cause of the evil complained of. After several meetings the sub-committee presented a report to a special Court of Governors on June 2nd, recommending that the hospital be pulled down and rebuilt. Fancy this, after a recent expenditure of upwards of £5,000 on the buildings. The special court, however, took exception to this report and passed a resolution appointing a sub-committee from among the governors to coöperate with the committee of management "to report upon the present system of management adopted at the hospital." After several meetings the following report was presented: "It is recommended that the hospital be thoroughly inspected as to sanitary arrangements, and that it be at once cleansed, whitewashed, &c., and re-opened as soon as possible, and that it be closed for thorough cleansing for a month every year. That the back part of the hospital be pulled down and a one-storeyed building be put up, together with other alterations, at a cost not exceeding £1000." This was done and the hospital was partially re-opened on Oct. 1st, after having been closed for five months.

But, little more than five months later, on Feb. 17th, 1883, in consequence of the unhealthy state of the wards, the committee, on the recommendation of the medical staff, again closed the hospital and appointed a sub-committee to inquire into the sanitary condition of the hospital generally. Their report was to this effect: "That, as far as the construction of the hospital is concerned, no alteration is required. That certain improvements recommended by Dr. Pavy, the medical officer of health, be effected as regards the soiled linen shoots. That the wards be at once disinfected, cleaned, and whitewashed, and that the hospital be re-opened as soon after April 1st as possible."

There were some other less important recommendations. The hospital was re-opened on April 20th, and between that date and the end of the year 209 women were delivered with but two deaths, 1 in 104, and yet, in the two years 1882-83 taken together, the mortality rose to no less than 1 in 23. In 1884-85 combined it was 1 in 48. In 1886, up to the closure on May 14th, 3 women died out of the 133 delivered, 1 in 44; and now we come to the period when the sublimate treatment commenced.

From the re-opening under its beneficial influence on July 1st, 1886, to Sept. 30th, 1887, 420 confinements took place without any death. From the same date, July 1st, 1886, to Dec. 31st, 1896 (ten and a half years) 4608 women were delivered with 11 deaths: mortality 1 in 419, or 2.387 per 1000. From Jan. 1st, 1892 to Dec. 31st, 1896 (five years), 2392 deliveries with 3 deaths—1 in 797 = or 1.250, i.e. 1½ per 1000, and these deaths were: 1. Sudden death in 1893 from pulmonary embolism on the third day after delivery (patient had shown no signs of illness up to the occurrence; and the report of the necropsy by Dr. Tooth, Demonstrator of Morbid Pathology to St. Bartholomew's Hospital, was "embolism of the pulmonary artery; no septic condition present.") 2. The second death occurred in 1894, from puerperal eclampsia, and took place on the third day after delivery. 3. The third death occurred in 1895 from puerperal eclampsia the day after delivery. So that we have in 1892, 487 deliveries with no death; in 1893, 430 deliveries with 1 death from pulmonary embolism; in 1894, 492 deliveries with 1 death from eclampsia; in 1895, 490 deliveries, with 1 death from eclampsia; in 1896, 493 deliveries with no death. Such a low rate of mortality as this one cannot expect to maintain, when it becomes a matter of fortune how many deaths from non-preventable causes may arise, such as the three from eclampsia and pulmonary embolism met with in the last five years. Only on Dec. 26th last I was called to the hospital to a severe case of eclampsia; the patient has happily recovered, but had she died it would not have enabled me to say we had had no death in the year 1896, and it would have increased the rate of mortality in the last five years.

Thus it will be seen that in the last five years among 2392 deliveries there has been no death in which septicæmia could have borne any part; and there has been also very little illness during this time. In the past year I have only been asked to see one patient who had a high temperature, and she was discharged quite well. I am assured that all the patients have been in a satisfactory state of health before they were allowed to leave the hospital. A total mortality of 1½ per 1000 is, indeed, I think, something to be proud of—5 in 4000—and no death from septic causes. This seems to justify the title of Dr. Cullingworth's address, "Puerperal Fever a Preventable Disease"; rather different to the time of my introduction to the City of London Lying-in Hospital, when 1 in 19 was dying.

I do not dispute for one instant the great share that cleanliness plays in these results. My late colleague, Dr. Matthews Duncan, spoke of antiseptic precautions as transcendental cleanliness.⁴ He had, he said, always defended the good or the better hospitals, and he was proud to know that now, when thoroughly antiseptically managed, they needed no defence. Their mortality was equal to, if not less than, that of private practice. During his whole life he (Dr. Matthews Duncan) had watched the generous and persevering attempts of his brethren to improve midwifery hospitals. Long ago, in Dr. Rigby's time, he came to London and saw a great ventilating scheme which was to work wonders. Architectural arrangements, drainage, ventilation, segregation and drugs had all been tried and all without securing success. The mortality in hospitals was terrible. He did not know what it was in private practice; probably it was as bad, or nearly as bad, as in big hospitals. Antiseptics, and antiseptics alone, had brought success and had sustained success. It was, he knew, common in highly respected quarters in London to attribute this modern success or diminished mortality in general hospitals, as in lying-in hospitals, to many factors—to improved feeding, housing, cleanliness, nursing, and antiseptics; and no doubt all were important, but all had failed till the antiseptic era, and all would fail again were antiseptic precautions—transcendental cleanliness—neglected. In his valuable book, "Mortality of

⁴ Transactions of the Obstetrical Society, vol. xxvii, p. 215. Discussion on Dr. (now Sir) W. O. Priestley's paper, Antiseptics in Lying-in Hospitals.

Childbed and Maternity Hospitals.⁵ Dr. Matthews Duncan says: "In a well-managed hospital they die at the rate of 1 in 100; all the country over the mortality is probably not much less, in the best private practice it appears to be greater." "In the years of my private practice of which I have preserved records I find 8 deaths in 736 cases, or 1 in 92." This was written in 1870, before antiseptic midwifery came in practice.

Why the sublimate treatment should not be adopted in private practice as well as in hospitals I am at a loss to understand. In my lecture to the midwives that I have spoken of, given in 1887, I gave them a list of what I order to be ready in the house of every patient who expects me to attend her in her confinement, and amongst the things was what would make half a gallon of sublimate solution (1 in 1000), labelled "To be used with an equal part of hot water as a lotion"; and I have continued this, very much to my satisfaction, ever since, and I have used the irrigation just as in the hospital practice and have never seen a sign of mercurial poisoning. In July, 1881, I had the great misfortune to lose my first private patient, and from puerperal septicæmia. This was before the days of sublimate and sterilising instruments, but not before the introduction of other antiseptics, and every precaution had been taken by the use of carbolic lotion and carbolic cream. It was a forceps delivery after forty hours labour in a primipara; an occipito-posterior presentation; and the perineum was partially ruptured. She became feverish after a rigor on the fourth day and died on the thirteenth day after delivery. The most unremitting attention failed to save her life. I cannot tell you the distress the loss of this patient—a young wife—caused me. Only those of you who have had similar losses can realise what it was. I told you in my address last January of a case of puerperal peritonitis in a patient delivered in December, 1890, who was attended by me under the most strict sublimate lines. It was a genuine case of acute septic peritonitis occurring a few hours after delivery, and although no necropsy was made, I feel convinced, from the reasons I gave you, that it was caused by rupture of a pyosalpinx, as in those cases narrated by Dr. Michie of Nottingham in his paper read before this society in May, 1885.⁶ If this case be excepted, no case of septicæmia has occurred in my private practice since I commenced the use of corrosive sublimate. It gives me a feeling of protection I cannot over-estimate. I feel sure if its employment in midwifery were generally adopted by practitioners for their hands and for vaginal irrigation the Registrar-General's reports of the mortality from puerperal septicæmia would very soon show a difference, and in these days of portable compressed drugs there is no reason why it should not be almost universally used, even among the very poor. To my mind it would be a great pity if Dr. Bantock's recent reference to mercurial poisoning were to deter practitioners from employing it. It is only right, however, that it should be pointed out to them what may result if it be *improperly* used.

In the annual report of the General Lying-in Hospital for 1883 the medical report, signed by Dr. (now Sir John) Williams and Dr. Champneys, says that 342 women were confined, of whom 3 died (1 in 114), 2 from septicæmia, quite independent of one another, "a percentage which testifies to the healthy condition of the hospital." This was during the time that antiseptics were employed there, but, you will note, before the corrosive sublimate was commenced, and the committee add in presenting this medical report to the governors: "The committee beg to tender their congratulations to the eminent surgeon to the hospital, Sir Joseph Lister, Bart., to whom this and other institutions are so much indebted for the satisfactory medical results obtained through the system with which his name is associated."

Sir William Priestley concluded his paper read before the Obstetrical Society of London in July, 1885, entitled "Notes of a Visit to some of the Lying in Hospitals in the North of Europe; and particularly on the Advantages of the Antiseptic System in Obstetric Practice," with these words: "Ample funds and sufficient space are necessarily most potent aids in waging warfare with disease in hospitals, but, even with limited means and space, absolute cleanliness, *supplemented by the antiseptic system*, may in our own country have a large influence for good, and the labours of our illustrious Lister prove of equal value to the obstetrician as to the surgeon.

If I am not mistaken some of our Fellows," says Sir William Priestley, "can tell us of triumphs of this kind in the lying in hospitals of London." I hope you will think that I have this evening succeeded in doing so.

I feel that I cannot conclude my address better than by saying that though numerous peerages have been conferred upon those "waging warfare" resulting in the *destruction of life* and victory (!) never has one been more worthily bestowed than on "our illustrious Lister" for the victory gained by him in "waging warfare with disease in hospitals," resulting in such an enormous *saving of life* among our fellow creatures.

I cannot sit down without congratulating the society upon its selection of my successor in this chair. Professor Mayo Robson will fill it, I am sure, with dignity, eloquence, and good judgement, that have never, at all events, been surpassed by any of his predecessors.

In bidding you farewell, I thank you all for the kindness you have displayed towards me and the assistance you have given me during the two years that I have presided over you, a period in my life of which I shall always have the happiest recollections.

SYPHILITIC DISEASE OF THE HEART WALL.

By SIDNEY PHILLIPS, M.D., F.R.C.P. LOND.,

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A PROFESSIONAL man, aged fifty-three years, who in his youth contracted syphilis had from time to time been troubled with sores on the tongue, and in 1890 suffered from epileptiform convulsions, of which a grave prognosis was given by the physician whom he consulted, but which gradually ceased to occur. A child of his had been under treatment by a well-known surgeon for psoriasis suspected to be of syphilitic origin. At Easter, 1894, while on a few days' holiday in the country, he went to bed apparently quite well, but was suddenly taken ill in the night. The physician who was called to see him has kindly given me the following account of his symptoms: "He was walking about the room in an agony of pain which he described as unendurable. The lower part of the sternum and epigastrium were the chief seats of pain, which went through to the back and also extended down the left arm; there was no marked pallor, no cyanosis, no laboured breathing; the pulse was 60 and laboured; there were no signs of valvular mischief about the heart and no irregularity of rhythm; there was a sense of distension of the abdomen. I ascertained this was the first attack of severe pain he had had, but there had been previously some discomfort and some pain running down the arm, and that his heart had been suspected of being at fault." Recovering under the free administration of morphia, he returned to town and to work against medical advice; but eighteen days after this attack of pain, on returning home from business, he quietly expired in an arm-chair while reading the evening paper.

I made the necropsy with the medical man who had attended him from time to time in London. There were no signs of disease anywhere, except that there were about two drachms of clear fluid in the pericardial sac and some soft bands of fresh lymph about half an inch long, easily broken across, extending from the anterior wall of the left ventricle just above the apex to the adjacent surface of the pericardium; on the surface of the ventricle beneath the lymph was a small area of ecchymosis the size of a shilling. The heart wall in this situation felt harder than elsewhere, and on section this thickening was seen to be produced by a yellow homogeneous-looking substance much resembling in appearance the almond of a wedding-cake. It was situated between the endocardium within and the pericardium without, entirely replacing the muscular fibre, and formed a nodule with a diameter of that of a florin in the anterior wall of the ventricle, which it thickened and toughened. The rest of the heart and the cardiac valves were healthy, except that the left ventricle was somewhat dilated. Mr. J. J. Clarke, pathologist to St. Mary's Hospital,

⁵ Edinburgh: A. & C. Black, 1870 p. 116.

⁶ Pregnancy Complicated by Suppuration in the Pelvis.—British Gynaecological Journal, 1895, p. 160.