

NOTES OF A VISIT TO SOME OF THE LYING-IN HOSPITALS IN THE NORTH OF EUROPE, AND PARTICULARLY ON THE ADVANTAGES OF THE ANTI-SEPTIC SYSTEM IN OBSTETRIC PRACTICE.

By DR. PRIESTLEY.—The hospitals visited were those at Copenhagen, Helsingfors, and St. Petersburg.

At Copenhagen, the new régime began in 1870. In the Maternity Hospital, in the fifteen years from 1850 to 1864, the mortality was 1 in 24; between 1822 and 1843 it had been 1 in 19, *i. e.*, only slightly lower than the mortality in the Nightingale Charity of King's College Hospital, which compelled the author to close the ward. From 1865 to 1874, the mortality from puerperal fever was 1 in 51; from 1870 to 1874, it was 1 in 87, the improvement coincident with increasing strictness in antiseptic precautions. The hospital is constructed in the most elaborate and expensive way to secure hygienic perfection, including ventilation, isolation of each part of the building, if desirable, and even a separate room for each patient. Moreover, the rooms are only used alternately, which is equivalent to halving the number of beds. The attendants are under strict rules of periodical purification, and are not allowed to pass directly from the convalescent to the lying-in wards. If a patient has been ill, the nurse is fumigated with sulphurous acid gas by an elaborate process. The same is used for disinfection of the rooms. The personal precautions include careful antiseptic hand-washing, soaking of catheters, etc.; no

sponges are used, the vagina is injected twice a day with carbolic acid lotion. The beds are of canvas filled with chopped straw, which is destroyed after use. Each bed has its own basins, syringes, catheters, etc. The placentæ and dressings are burnt. On suspicion of infection, the patient is isolated, and admissions suspended to that part of the hospital. The medical officers are not allowed to attend autopsies. The director lives in the hospital of which he is absolute master. As in other hospitals, there is an undue proportion of difficult cases and primiparæ, and the primiparæ have a large share in the mortality. The midwives of Denmark are compelled to use antiseptic precautions, and this has sensibly reduced the mortality.

At Helsingfors, the hospital is arranged on the pavilion system, one block being devoted to diseases of women, including wards for operations and rooms for out-patients. The wards for lying-in cases contain about forty-two beds; the beds were in the middle of the rooms. The mattresses were sacks of fresh rye straw for the non-paying patients, and with horsehair or bark of the lime-tree for paying patients, all being cleaned, baked, and remade for each new patient. Some patients lay on the bare boards of the bottom of the bed, as is usual in Finland. Antiseptics were not as minutely carried out here. Midwives and nurses were made to wash their hands and arms with soap, and afterwards to rub them with dry hypochlorite of lime before examinations. Abnormal cases were isolated. The medical officers were forbidden to attend autopsies, or to touch infectious wounds without taking antiseptic precautions afterwards. Catheters were carbolized, and the wards periodically closed and cleaned. After labor, a single injection of carbolic acid was given, and often when specially indicated. The linen was simply washed, the blankets were fumigated by burning sulphur. Professor Pippinsköld trusts largely to the excellent hygiene of the hospital (built on a rock high above the town), and to the clean habits of the people; but the external genitals are always washed before delivery, otherwise the object is to guard against external morbid influences, more minute care being thought unnecessary under the circumstances. Before the new maternity was opened in 1879, the total mortality averaged 1.83 per cent. From 1879 to 1884, the total mortality was one per cent.

At St. Petersburg (the Grand Duchess Catharine Maternity Hospital), there were arrangements for isolating the various parts. Scrupulous cleanliness, the disinfection of rooms, concrete floors, draining into a central gully, the careful use of antiseptics are included in the system. In the last three years, there had only been one death from puerperal fever, though six from other causes.

DR. MATTHEWS DUNCAN said that the subject of antiseptics in midwifery was the greatest subject in the whole obstetric depart-

ment, but it got very little attention. The subject was greater than the prevention of epidemics, which came occasionally, while puerperal deaths were constantly occurring in the most valuable members of the community. The value of antiseptics in midwifery had only lately been estimated, because it was only recently that the profession had agreed as to the mortality of childbed. Some men had their thousand of cases without a death, and while he did not doubt their veracity, he did not accept their statements. No man could claim immunity from deformed pelvis, placenta previa, puerperal convulsion, phlegmasia dolens, puerperal inflammations, puerperal scarlatina, puerperal septicæmia, or puerperal insanity. Farr began by ridiculing the demonstrated puerperal mortality, but he eventually nearly accepted the received view—that about one in one hundred and twenty die in childbed, or within a few weeks after delivery. In the history of the subject, all measures had failed to reduce mortality till antiseptics were introduced. Abroad, the great mass of women were attended by midwives, who were compelled by law to use antiseptics; in Great Britain most were attended by doctors, very few of whom used antiseptics. He hoped they would be universally adopted.

DR. JOHN WILLIAMS said that we should keep clearly in our minds that we cannot abolish by antiseptics the effects of pregnancy and labor, but we may hope to abolish deaths from puerperal fever. The mortality of the St. Petersburg Hospital (one death from puerperal fever in three years) was a near approach to this. The results at Copenhagen and Helsingfors are little better than those in the Rotunda of Dublin before antiseptics were used. In seven years of office, Collins admitted about 16,000 women, had two epidemics of puerperal fever, in which about 80 died, and the total mortality was one per cent. Dr. Macan, the present master, admitted during his first year of office 1,090, and of these 6 died, 2 at least from other causes than septicæmia. This excellent result has been obtained by careful antiseptic precautions. Dr. McClintock calculated that one-fourth of the deaths in childbed were not due to childbed, taking the deaths in childbed at one per cent, the lowest mortality in childbed after the destruction of puerperal fever would be $\frac{1}{4}$ per cent or 2.2 per thousand, and our object should be to reduce our mortality to this level—this, he believed, might be attained by antiseptics. This was the object of Dr. Champneys and himself at the General Lying-in Hospital, but the object had not been attained. During the first four years, there were 7 deaths in 1874, or a little more than $\frac{1}{4}$ per cent. During the first twelve or eighteen months, carbolic acid was used; during a second similar period, permanganate of potash, and since May, 1884, corrosive sublimate. During the first two periods, there was a good deal of illness, though the mortality was low. Since the use of corrosive sublimate has begun, there have been no deaths from puerperal fever, and almost an entire absence of mortality. The mortality mentioned is the *total* mortality; for all cases which were not well at the time of their discharge from the hospital were admitted into St. George's Hospital under Dr. Champneys or into University College Hospital under Dr. Williams, and the result was incorporated with the statistics of the General Lying-in Hospital.

DR. CHAMPNEYS said that the total mortality from all causes in the General Lying-in Hospital in the last four and a half years, since Dr.

Williams and he had had charge of it, was 9 in 1,360, that is, 1 in 51, or 0.66 per cent. The last two deaths were from phthisis, with which the patients were practically moribund on admission. These results are decidedly good at the present time, though it is hoped to improve them in the future. The greatest care is taken to follow up the cases; on discharge, each patient is furnished with a postcard directed to the hospital, on which she is requested to write her state and that of the infant about a month after her discharge, or six weeks from her confinement. No statistics of lying-in hospitals are trustworthy which do not give the total mortality from all causes, and which do not state that no patient was transferred to another hospital, or that, if transferred, her progress was ascertained. The statement that no deaths occurred from puerperal fever is worthless in the absence of the whole mortality, and, indeed, all cases dying after child-birth are presumably, or in the absence of distinct proof to the contrary, cases of puerperal fever, and such cases often give unmistakable, though unexpected, evidence of septic processes after death. Thus the statement that in the St. Petersburg Hospital there had only been one death from puerperal fever in three years, while there had six deaths from other causes, does not carry conviction. This is certainly a most unusual proportion. What were the causes of the other six deaths? The triumphs of antiseptics had been greatest in the most filthy localities; where cleanliness and general hygiene had been attended to, the benefit, through undoubted, was less striking. Antiseptic teaching should be as clear and as definite as possible; if details were unnecessarily multiplied, nurses, and even practitioners, were liable to confuse the essentials with non-essentials, and even to throw the whole thing overboard. He found no difficulty in carrying out the same details in private as in hospital. The all-important thing is scrupulous antiseptic cleanliness of the hands. On this he insisted on the part of nurses, as well as on his own; and inspection of the nails and skin of the hands of nurses was important on this account.

DR. WEST thought that the teachers of midwifery, or better still, the Obstetrical Society, should pronounce definitely as to what was essential in antiseptic treatment. In Vienna, frequent vaginal washing and the introduction of iodoform into the uterine cavity formed part of the system. Women would, he thought, be apt to dislike this interference, and it would also suggest to them the great danger which there must be to necessitate it.

DR. PLAYFAIR was sure that in private not one man in one hundred used antiseptics in any thorough way. There were none of the difficulties which Dr. West had imagined; and in his own practice antiseptics were as rigidly enforced as it was possible. Absolute surgical asepticism was, of course, impossible. He now supplied his nurses with antiseptic rules printed on a card, the chief rules being that the nurse should never touch the neighborhood of the genitals without careful antiseptic washing of the hands. The same precaution was taken with regard to all sponges, catheters, etc. Corrosive sublimate was preferred to carbolic acid. These rules were even more important for nurses and midwives, who often touched the genitals, than for medical men, who, as a rule, only did so during labor. Nurses were apt to be careless of details and of cleanliness, and the result was visited on the medical man. He hoped that antiseptics would soon be the routine practice, and he was sure the result would be most satisfactory.

DR. GIBBONS remarked on the common practice of pouring a few drops of antiseptic solution into an unmeasured quantity of water, which was useless. He asked Sir Joseph Lister what strength of carbolized vaseline should be used.

DR. MURPHY (Sunderland) regretted that the discussion had not included the details of the antiseptic treatment recommended. He asked the opinion of the Society as to the justifiability of attending a case of labor shortly after having examined a case of puerperal fever in consultation. The text-books say that practice must be given up for several months. Dr. Murphy thought that change of clothes and a warm carbolie bath, 1 in 100, for half an hour, gave sufficient security.

DR. BRAXTON HICKS agreed with Dr. Matthews Duncan as to the value of antiseptics in midwifery, but not as to his estimate of puerperal mortality. He had in ten years of early practice some eight hundred to one thousand cases, and only one death which was from puerperal fever. Morbidity was as important as mortality. He referred to the injurious effects of human lochia inoculated into rabbits as showing their poisonous character. The antiseptic vaseline or oil was of little importance compared with antiseptic cleanliness of the hands.

DR. HARVEY said that in Calcutta for many years carbolized oil had been used for vaginal examinations, and that vaginal injections of carbolie acid or corrosive sublimate were used if any fetor were noticed in the discharges. When there was pyrexia besides, the uterus was washed out. Good had resulted, but the mortality in Calcutta would always be high, as patients were often admitted after many hours of labor and after the establishment of septicaemia.

DR. PRIESTLEY, in reply, congratulated Dr. Williams and Dr. Champneys on the results obtained by them, and said that he was informed by Dr. Griff that of eleven hundred deliveries in Queen Charlotte's Hospital, between February 14th, 1884, and July 1st, 1885, there had only been one death, and that was from puerperal convulsions. He agreed with Dr. West as to the desirability of defining what amount of antiseptics were necessary, and he doubted if autogenetic infection existed. Antiseptic cleanliness of all things touching the genitals was all-important, but vaginal injections had better be retained meanwhile.
