another and apparently an antagonistic one immediately complicates it, as follows: "Was not the person supposed to be infected poisoned by the same source as the original patient?" It is a significant circumstance that, when facial erysipelas was raging, an enormous amount of sewer-air seems to have been pent up in the drains, actually having been seen bubbling up through the water in the pans of the water-closets on both sides of the asylum.

The medical staff were unanimous in their opinion that sewer-air was the cause of the outbreak of facial erysipelas; for, since tapping the inside as well as the outside of all the water-closets, a lull in the severity of the symptoms occurred, and the rush of sewer-air up the pipes was inappreciable as compared with the rush prior to ventilating the water-closets. Although the committee were divided in their individual opinions upon the precise cause and source of the outbreak of facial erysipelas, I consider they should have followed my suggestion of the imperative necessity of calling in a first-rate sanitary adviser, locally independent, from the first time when I suggested a sanitary inspection of the asylum. Some of the drains were badly laid, as leakages were found in different parts, both in the asylum and in the airing court. The committee, indeed, themselves had ocular demonstration of what was wrong in the state of the drains when those underneath the single rooms in the new buildings were examined, for they saw the water being baled out, which stank horribly of feculent matter, whilst others saw the black sewage-matter which had exuded from the joints of the drains in the airing court.

The outbreak of enteric fever, following so closely on that of facial erysipelas, confirmed the suspicions of the medical staff, that the sanitary arrangements of the asylum in 1879 were imperfect, dangerous to the inmates, and the cause of both epidemics.

To conclude, however, the following facts are worth recording. In the epidemic of facial erysipelas, no attendants or servants were attacked, and the last case occurred in June 1879. The first case of enteric fever occurred in August 1879; the epidemic was confined to the female division of the asylum, but attendants, as well as patients, were attacked. The coincidence is curious that enteric fever attacked two patients within twenty-four hours of each other, although living in totally different wards, one of these having had facial erysipelas in the summer, although mildly. Lastly, the occurrence of two such severe epidemics in one year is surely unique in the history of county lunatic asylums.

Re-appearance of Facial Erysipelas in 1881.—The re-appearance of this unwelcome visitor, together with the continued presence of febrile diarrhoea, led to the suspicion that the sanitary arrangements of the asylum were still defective and dangerous. Anyhow, the number of cases amounted to twenty-nine, and two deaths, all on the female side. Further comment seems unnecessary; but when seventy-five cases of facial erysipelas, with seven deaths, and twenty cases of enteric fever, and four deaths, occur in twenty-four months' time, the observation of the chairman of the committee to quarter sessions, last June, seems startling: "Regarding the outbreak of disease, it is quite true I have never been satisfied with the sanitary difficulties dwelt upon by the Commissioners in Lunacy, and made much of by Dr. Medlicott".

ALLEGED ILL-TREATMENT OF A LUNATIC.—An inquest, extending over two days, was opened at Birmingham on Monday on the body of David Pullam, an operative painter, who died in the Birmingham Lunatic Asylum on the 13th inst. Deceased was admitted on the 10th inst. and, on being visited by his wife on the following day, he was found to be severely bruised about the body and to be unconscious. In this state he remained until the 13th inst., when he died. Several inmates of the asylum were called, who stated that the deceased had been grossly ill-used by an attendant named Hughes, but this official denied having ill-treated him. The medical evidence showed that death was due to inflammation of the bowels and shock from a rupture of the bladder, which had possibly been caused by a fall. The inquiry was resumed on Tuesday, when the coroner said the evidence already given was of such a nature that he thought it desirable, in the interests of the medical officers of the institution, that they should be afforded an opportunity of contradicting it; and an application was then made on behalf of Dr. Dodds, who attended the deceased, for an adjournment for a month. The jury also presented, though the foreman, a requisition to the coroner supporting this application, and asking that the coroner would lay the whole facts before the Lunacy Commissioners and the Home Secretary, as they desired, if possible, in the interests of the governing body of the institution, not to return a verdict of a criminal nature. At present, they thought that great negligence was displayed by the medical men as the evidence of the relatives clearly showed brutality on the part of the attendant Hughes. The coroner said that he would adjourn the case for a month, and see that the wish of the jury was forwarded to the proper authority.

ON OPHTHALMIA NEONATORUM, AND ITS PREVENTION.*

By KARL GROSSMANN, M.D.,
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AN eye-disease which, in the first state of its development, almost always comes under the observation of the general practitioner before undergoing the treatment of a specialist, and which, as it seems, can be reduced to a minimum of exceptional cases by taking the appropriate measures against it in time, does not require any apology for being brought before you, here, in this place and at this opportunity.

If we go through any large blind asylum, we are surprised to find that the percentage of those whose blindness is caused by ophthalmia neonatorum amounts to the enormous figure of 60 per cent. to 75 per cent. These poor individuals, when asked, tell us regularly that they were born blind; but one look at their eyes is sufficient to show that the cause of their blindness dates from the beginning of extra-uterine life. And if you consider that in the blind asylums only those patients are admitted whose blindness is double-sided, you may easily make a conclusion as to the true number of eyes destroyed by ophthalmia neonatorum. It is a very common occurrence, in every eye hospital, to see a mother bringing in a blind, but otherwise healthy-looking, child of one or two years old. When the child's lids are opened, you see the white opaque cicatrised cornea, often enough bulged out so much by the dilatation of the corneal scars that the lids do not suffice to cover the protruded and distended eye. Or you find a small atrophied stump, the result of a more general destructive inflammation; in short, a great variety of mutilations, which have all the one feature, that scarcely any help can be afforded, or only very little improvement to the sight be effected—a fact sad enough by itself, but rendered more melancholy still by the idea that the greater, nay, the overwhelming majority of these eyes could have been saved by an appropriate treatment, applied at the proper time. But how is the occurrence of this pernicious disease to be prevented? Let us, in order to answer this question, inquire for its causes.

There can be no doubt, at the present time, that the real and only cause is the infection from the secretions of the maternal passage during, or shortly after, birth. The secretions of the vagina need not exactly be of a purulent character, such as fluor albus or gonorrhoea; for it seems that, before and during birth, these secretions acquire often a character quite as infectious as that of gonorrhoeal discharge, though appearing in no way different from the physiological discharge of the mucous membrane. At least, the only one trustworthy statistic which we have of this kind speaks for this fact; it is the one which Mackenzie published of the Maternité Hospital of Stockholm in 1832. Of 328 women confined, there were 137 with fluor albus, 20 children of whom were affected with ophthalmia, and 181 without fluor albus, 10 children of whom were equally affected; thus showing that, whereas of the women with leucorrhoea every seventh child became infected, of the other women only every eighteenth child was suffering. In what way the normal-looking secretions of the pregnant woman are changed, we do not know, but the fact speaks for the infectiousness. And if we consider how intimately—nay, how inevitably, the secretions of the mother are brought into contact with the infantile conjunctiva, it is astonishing enough that we do not see the above statistic much more unfavourable. At any rate, we do well not to set our mind at ease with the much liked and used explanation that "a cold" is the cause, and that it will pass away by itself or by continued poultices. Many an eye destroyed in this way has fallen in my way during the two years that I have been in Liverpool. The period of incubation, after infection, is three or four days. I have never seen it less, often longer. For the latter, we can easily account by the near contact between mother and child after birth, the infectiousness of the secretions being so great that the contact with the linen or the fingers of the mother explains well enough the later appearance of the inflammation.

I do not need to give you a long description of the disease itself; it is known to you all. Nor do I need to dwell upon the great danger which arises for the eye by even the slightest implication of the cornea. You know that this makes the prognosis at once "pessima", as we cannot, with the greatest care, control the ulceration nor prevent entire keratomalacia.

If we consider what trouble the well developed ophthalmia gives in its treatment, and how little we can do when the cornea has once partaken in the affection, we must be highly satisfied by the fact that the

* Read before the annual meeting of the Lancashire and Cheshire Branch.

idea of preventing its outbreak by prophylactic measures has been crowned, as far as is known till now, by a splendid success. In order to seize the evil at its root, Crd in Leipzig carefully treated the least trace of vaginal catarrh of the pregnant women, so that, at the time of the confinement, the fluor had quite vanished. He had some success; but in a comparatively great percentage the outbreak of ophthalmia could not be prevented. The local treatment of the maternal passages, however valuable, did not prove sufficient; and this result led to the experiment* of disinfecting the eyes of all new-born children, without exception, as soon after birth as possible. In some cases, where a fluor albus existed, the disinfection of the eyes of the child was performed immediately after the birth of the head, before the body was born completely; and from the statistics obtained thus, you will judge yourselves with what success.

The method, which varies a little in the composition and strength of the lotions applied, is the following. Every child, without exception, whether of a healthy mother or of a mother suffering from leucorrhoea, must be subject to it as soon after birth as possible. The closed eyelids are washed and cleaned outside with a lotion of 2 per cent. carbolic acid.† This having been done most carefully, the eyelids have to be turned round, so that they form a complete ectropion, with the conjunctiva tarsi entirely exposed. Then, after carefully removing every trace of flaky secretion which may be found there, the conjunctiva has to be inundated with the 2 per cent. carbolic lotion for one to two minutes, care being taken that the lotion reaches every part of the conjunctival sac. This manipulation ought to be repeated three times daily during the first two days of life. Should the mother have had a very strong catarrh of the vagina, it will be valuable to pad the child's eyes, between the three times of cleaning, with a cotton-wool pad dipped in the same lotion, and renewed every half-hour during day-time.

You will object that this treatment, applied to every case of birth, is a great trouble and inconvenience for the practitioner, who is already hampered enough by his other duties; but let me now show to you the statistics obtained by this method.

In Leipzig, at the Obstetric Clinique, the percentage of ophthalmia came down from 13.6 per cent. to 7.6 per cent. at first; and in the following half-year, there was, out of two hundred births, only one child subject to ophthalmia; and in this one case the application of the lotions had, by neglect, been forgotten. In Halle, the percentage gradually came down from 12.5 per cent. to 6 per cent., and then to 3.6 per cent. It is obvious that in the beginning, when the nurses were not yet so well instructed, the percentage was yet comparatively great, and then decreased continually. My own statistics are yet small; the results of the experience, gathered by me in two of the Liverpool work-houses, are not yet numerous enough to be of a great weight, though, during the last four months, while the method was carried out, not a single case of ophthalmia neonatorum occurred. Those cases which I have treated privately, under my own personal care, are only five, but all of them were successful. In each of these cases, the mothers brought to me a child which had lost the sight by ophthalmia neonatorum, and consulted me about this child's eyes. All these mothers being pregnant and suffering from fluor albus, I advised them to have the necessary measures taken, that the expected child might be saved from the sad fate of the previous one. They were only too glad to have all necessary precautions taken, and the result was a complete success.

It is true that, in the majority of cases, this proceeding may be superfluous; but in the poorer classes, where not so much care can be afforded to the newborn, and where every disease has a more fertile ground, it is our duty to carry the possibility of fighting successfully against so destructive an inflammation, especially as it has been noticed that, even if the affection set in at all, it is much milder and less injurious than if left to itself. It will therefore be obvious of what great value this method is, if applied generally, both from the standpoint of humanity and of national economy. And, therefore, I hope you will support the specialist, who almost only sees the destructions made by this insidious disease, and who can but seldom do anything for its prevention; I hope that you, whose work is already overloaded with many a hard duty, will not decline to try in your practice the method which I have brought here before you.

* This had been recommended before by von Wecker and Graefe, but no experience had been gathered.

† This lotion of 2 per cent. carbolic acid in water answers perfectly well, and does not produce such strong reaction as the like lotion of nitrate of silver applied to a normal conjunctiva.

QUADRUPLE BIRTH.—A woman in Berlin was delivered a short time ago of four living children. One of them lived a day; another four days; and the other two a week.

CALABAR BEAN IN TETANUS, WITH CASES.

By J. THOMPSON HAGUE, L.R.C.P. and S. Edin., L.S.A.Lond.,
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THE patients, of whom the subjoined is an account, were all negroes, treated in the Zanzibar Military Hospital during 1879 and 1880.

CASE I.—Mohammed bin Sali was brought into the hospital on the morning of November 30th, in an exhausted and apparently moribund condition, having suffered from tetanus for fourteen days previously. When he arrived at the hospital, the spasms were so frequent as to be almost continuous. He was bent nearly double, and had bitten his tongue so that the end was almost dropping off. In order to allay the spasms caused by his removal upstairs into the ward, I administered chloroform. During the inhalation the spasms ceased; but as soon as the effect of the anæsthetic began to pass off, they returned with all their former violence. One-sixth of a grain of extractum physostigmatis was then given by subcutaneous injection. Two sharp spasms followed, but in eight minutes these had ceased, and the patient fell into a deep sleep, which lasted three hours. When he awoke, the patient was in all respects much better. He drank half-a-pint of beef-tea, and bore an enema without a spasm. Afterwards he took beef-tea and milk at intervals, and slept most of the day. Next morning, as the spasms had commenced again, I administered the Calabar bean as before, with the result of checking the spasms entirely. Nourishment was taken eagerly during the day, and the patient seemed convalescent.

On the following morning, the patient was sitting looking through the window, when he was seized with a spasm; his breathing was stopped, and he died almost instantly. I was not present; but from the account given by two of the hospital assistants, I think death was doubtless caused by spasmodic closure of the glottis.

CASE II.—Simba was admitted into hospital on February 8th, 1880, having been stabbed in three places. The bowels protruded from a wound of the abdomen, and there were incised wounds of the scalp and of the left forearm. All the wounds were treated with silver sutures, and a dressing of carbolic lotion, and until the third day all went well. On that day there was pricking pain in the scalp-wound, which was seen to be dry, gaping, and inflamed. The sutures were removed, and water-dressing applied. During the night tetanic symptoms were observed; and when I saw the patient in the morning, he had very frequent violent spasms. All the sutures were removed, and one-sixth of a grain of extract of physostigma was injected into the calf of the leg, under chloroform. On the withdrawal of the anæsthetic, the spasms were much less violent than before; but as they had not entirely ceased, the injection was repeated at the end of an hour, and with such good effect that there were no tetanic symptoms until evening. I then repeated the injection. After this there were no symptoms of tetanus; but the Calabar bean was given once a day for the next three days, as a precautionary measure. The patient was discharged cured at the end of twelve days.

CASE III.—Abdallah was admitted May 4th, 1880, suffering from frequent and severe tetanic spasms, which were judged to be excited by a nearly healed incised scalp-wound, which had been treated by a native medicine-man with powdered bluestone and incantation. One-sixth of a grain of extract of physostigma was given, under chloroform. The spasms returned in twenty minutes; and in an hour the injection was repeated, but the severity of the spasms increased. Twenty-five grains of chloral were given, but met with no more success than the Calabar bean. In the evening I made an elliptical incision on each side of the cicatrix, and repeated the injection. There were several spasms during the night; but each was less severe than its predecessor. In the morning the usual injection was given; and after this there was no more sign of tetanus than occasional twitchings of the muscles, and once or twice spasm of the glottis in swallowing. At the suggestion of one of the surgeons of H.M.S. *London*, I removed the cicatrix, lest, when it became again united to the rest of the scalp, it should give rise to the same symptoms as before. The wound granulated, and the patient was discharged.

As these three cases form the sum total of my experience in the treatment of tetanus, I have no claim to be didactic, or to dogmatise as to the course to be pursued by others who may have charge of similar cases; but there are two or three points of interest which induce me to publish these notes.

In the first case, emprosthotonos was one of the symptoms, which is so uncommon an occurrence, that Mr. Holmes says he has never spoken to anyone who has seen an example of it.

In Case III, no remedy that was tried seemed to be of use, until the