CLINICAL REMARKS

ON

THE TREATMENT OF SMALL-POX:

BEING PORTIONS OF A CLINICAL LECTURE DELIVERED
IN DR. STEEVENS'S HOSPITAL, DUBLIN.

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GENTLEMEN,—In the early part of the session, I called your attention to a case of small-pox at that time lying in No. 15 Ward. I did so in a hurried manner, stating my belief that we should have little opportunity of studying that disease, that our cases were likely to be mild, few and far between. I then advised you to make the most of the occasion, as I believed that vaccination would prevent any serious inroad of this the most formidable epidemic which invades these countries. Unfortunately my anticipations have been disappointed in this respect, and Dublin is now suffering from an epidemic of small-pox, unequalled in severity since the establishment of vaccination in Dublin by the formation of the cow-pock institution in the year 1804. As proof of this, I may mention that, when discussing this question with my seniors in the profession, they have invariably informed me that their experience has afforded nothing equal to the present epidemic in intensity, or in extent of area. I must state that my experience of small-pox has been but limited in time, although since last April I have treated great numbers of cases. While a medical student I saw but two cases, and since I became a practitioner I have had but the scanty experience of the slight epidemic of 1864, when the total number of deaths from the disease in this city numbered but forty-one, while in the present epidemic it has already exceeded five hundred.

In considering the treatment of small-pox, we have to look at it first from the same point as we view other forms of malignant fever, such as scarlatina, typhus, etc., and then to consider it from some special point of view; for, as you have seen it now in its various phases, you are aware that its forms are various, from the slight, or what I have named abortive cases, to the terrible hæmorrhagic variety. In fact, none of you have seen any febrile disease so variable in its types except epidemic cerebro-spinal meningitis, with which our wards were crowded two years ago. We have therefore to adopt some classification when considering the treatment of small-pox, for its treatment is as various as its forms. We may classify our cases into abortive, modified, unmodified, and malignant. The abortive class, which I have pointed out to you as the variolous fever without the eruption, requires little or no treatment; probably a diaphoretic, a purgative if the bowels be confined, and a dose of chloral to obtain sleep, will be all that is required for these cases; they generally recover in from four to six days.

We have next the modified class; many of these cases also are insignificant, and may be treated in the same way as the abortive cases; but others are severe and require special treatment, to which I shall refer more particularly by-and-by. We must remember, when treating a case of this modified form of small-pox, that we are dealing with a disease which, though it sets in furiously, tends to subside quickly and quietly. Many of these cases set in with a temperature of 104 or 105 degs. (in one case I observed a temperature of 106.6 degs.), followed immediately by delirium, swelling, and confluence of spots on the face; but the modification produced by vaccination is so great, that this all subsides on the sixth or seventh day, there is no attempt at secondary fever, the spots dry into nodules like soft warts, and the patient is well. You must be careful how you attribute the "cutting short" of such a case to your treatment; for here you have only to treat the symptoms for the comfort of the patient, and need not look forward to the long, slow, and scarcely probable recovery of the real, unmodified confluent case. It is cases such as these that swell the statistics of successful treatment of confluent small-pox. The permanent fall in temperature will generally be your guide in these cases.

The unmodified form, with which may be included those cases which are but slightly modified, requires much greater care and watchfulness; and the treatment had better be considered according to the conditions which arise in each case. I must here again remind you that small-pox, although having varieties and peculiarities, must first be looked at from the same point of view as other eruptive fevers. You can guide it, you can modify the conditions which arise, you can treat its complications and sequelæ, and you may obviate the tendency

to death, but you cannot cut it short by any means at present known to medical science. We have two sets of conditions to treat in small-pox; one which is common to all forms of eruptive fevers, the other set depending on the peculiar affection of the skin accompanying this complaint. Let us consider the treatment of each of these sets of conditions separately. The general treatment is the same as that for other kinds of malignant fever. Head-symptoms arise early in the disease, and if mild usually yield to sedatives, especially chloral, in doses of from twenty-five to forty grains, to be repeated at intervals if necessary, as you constantly see me use it in the treatment of sleeplessness and the milder forms of febrile delirium. The more furious delirium is, however, one of the most serious conditions which you are called upon to treat. You have here a patient entering upon a long and serious disease, which is accompanied in its latter stages by long and wasting illness, and you must husband all his strength to meet what is to come. On the other hand, your patient is wild and sleepless, rambling about, perhaps attacking his attendants, employing as dangerous missiles any movable article within reach, liable to injure himself and his attendants. His skin is so tender and sore, that the least attempt to lay hands upon him makes him more furious still. I believe, under these circumstances, no matter what may be said to the contrary, that the strait jacket and tying down are the best remedies. The patient is less liable to be injured by these means than by what may be termed a continuous fight with his attendants; the struggle is over in a few minutes, the patient is secure, and other remedies can then be employed. Short of physical restraint, I believe that the only remedies we have at hand are depletives. First try tartar emetic combined with a little morphia, about a quarter of a grain of the former with twenty minims of the solution of the hydrochlorate of this latter as a draught. If this do not succeed in half an hour, repeat the dose; if this fail, try a few leeches, from two to four, applied to the temples; these, with the tartar emetic, seldom fail to produce sleep. In the most furious cases, these remedies had better be applied after the patient is secured by a strait jacket. You must not understand, however, that I am encouraging depletive treatment of small-pox; far from it, for you will find that these very cases which may require this depletive treatment will in a few days require stimulants, and stimulants in these cases are to be administered on exactly the same principle as in other forms of fever. The headache, which is generally intense, will be relieved by a leech to each temple or behind each ear.

The Throat.—The affections of the fauces and larynx are perhaps the most formidable we have to deal with; for, in the present epidemic, these are the most common cause of death, especially those of the larynx. The fauces are best relieved by poultices externally, inhalation of steam, and the application locally of solution of nitrate of silver (forty grains to one ounce). For the laryngeal affections little, I fear, can be done locally; but I have generally obtained the greatest relief by the application of leeches over the larynx externally, and this is a matter which should not be long delayed, since inflammation of the fauces generally precedes the laryngeal affection; and when the faucial inflammation becomes severe, we should at once begin to treat the larynx by the application of leeches. Tracheotomy has been suggested in these cases; and where the obstruction of the glottis depends merely upon the œdema caused by the faucial inflammation, I believe tracheotomy to be admissible; but when we have reason to think that the obstruction depends upon the presence of pustules in the larynx or trachea itself, I consider that opening the air-passages would only increase the danger of the patient. Chest-complications, when they arise, must be treated on the same principles which guide us in treating these affections generally.

The ophthalmia which arises during small-pox is often of a virulent and destructive character; and although ophthalmia is considered a prevalent disease in this country, yet, strange to say, I have little experience of it as a complication of small-pox to lay before you. Out of four hundred cases, I have but seen half a dozen where the eyes gave cause for anxiety; these we treated by poultices applied to the eyelids, to keep them soft, and to prevent the formation of scabs, which tend to produce adhesion of the eyelids and consequent retention of pus within them; also by the application of the solution of nitrate of silver. I am happy to say I have never seen an eye permanently injured by small-pox.

Purpuric Cases.—The treatment of these must be somewhat different from that of other cases, as we have to deal with a malignant fever complicated by purpura, and usually accompanied by hæmorrhage. In these cases, depletion is out of the question, for the application of leeches would be followed by fatal hæmorrhage. I have never seen a case of hæmorrhagic small-pox recover, but I have seen a case rally, and the hæmorrhage cease for forty-eight hours before death; therefore I believe the treatment followed in these cases should be adopted as soon

as possible under similar circumstances. I gave turpentine punch every two hours, composed of half a drachm of oil of turpentine, an ounce of whiskey, and four ounces of hot water, with twenty minims of fluid extract of ergot added. I have tried perchloride of iron without any success, and the turpentine punch alone without success; but, with the addition of ergot, I have been partially successful in these cases. In one, the turpentine punch had been used unsuccessfully for twenty-four hours; but, on the addition of ergot, the hæmorrhage diminished after two doses, and after four doses it had ceased, and the patient rallied for forty-eight hours before death. The cause of death in this case was laryngitis. You will perhaps be surprised that I have said nothing in commendation of the much spoken of antiseptic method of treating malignant fevers. I have not employed it in small-pox for the following reason: that, having tried it in many cases of typhus, in some of typhoid, and also in scarlatina, I was dissatisfied with the results. When stimulants were indicated, the antiseptic treatment did not seem to diminish the amount of stimulation required. I have saturated patients with carbolic and sulphuric acids until the urine responded to the tests for these agents, and in no case did I think any benefit accrued; and in some there was considerable gastric irritation, which I believe was owing to the antiseptics. With these cases before me, you may judge that I have had little encouragement for the employment of antiseptics.

Skin-Affections.—The treatment of the skin must be directed to two objects; first, to allaying the discomfort of the patient, then to the prevention of disfigurement from destruction of the skin. The first is best promoted by keeping the skin moist, which is attained by the application of poultices and emollient lotions, such as glycerine and water, oil, or a mixture of liquor plumbi and oil; of these, I believe the glycerine and water to be the best. To prevent disfigurement, or, in other words, pitting from small-pox, has long been a problem to the physician, and one which is still unsolved. I have already pointed out the nature of the destructive change of skin, and how the pit is formed; and it is manifest that, if we can in any way produce abortion of the pustules, we prevent pitting. Many plans have been proposed. It has been supposed that light promotes these destructive changes, and that the exclusion of light will prevent pitting; and patients have been kept in darkened rooms, or have been painted black, to prevent the light from acting on the skin. I have seen this plan signally fail. Dryness has been said to be the cause of pitting, and the greater number of pits on the face than on other parts of the body has been explained by the drying of the face from exposure, while the body is kept moist by being covered with the bed-clothes. Dr. Stokes has ably indicated these points, and has suggested poultices as a means of maintaining a moist condition of the skin; but I do not think that the difference in moisture makes the difference in pitting of the different parts. I have often pointed out to you how the eruption selects the most vascular parts, such as chapped wrists, rag-nails, etc., and how, in one case, it followed the inflamed track of a long but slight scratch on the back of the wrist and hand. The face is the most vascular portion of the surface, therefore is most attacked by the eruption—not, in my opinion, because it is more exposed to the light or to the drying influence of the air. The suggestion of the treatment is obvious; diminish the vascularity, and you diminish the severity of the rash, or may produce abortion of the pustules. This is also pointed out by Dr. Stokes, who quotes a case which occurred under the care of Dr. Graves, where a patient, whose knee had been strapped for a surgical operation, was attacked by small-pox, and the portion strapped escaped injury from the rash. I have therefore attempted, at the suggestion of my friend and colleague, Mr. Robert M'Donnell, to diminish vascularity by strapping, and thus to procure abortion of the pustules. I believe I have been in a great measure successful in this line of treatment; for I have found that, when the forehead of a small-pox patient is strapped during the papular stage of the eruption, the vesicles have aborted, and no marking has ensued. Of course, strapping is not applicable to all parts of the face. I have therefore tried various methods of varnishing the surface with contractile and inelastic varnishes. I have not been able to find any coating possessing these qualities to a sufficient degree to ensure success. I have tried collodion and gummy varnishes, but most have failed. I have met with patent collodion called xylonite, which best fulfils the conditions required. Although somewhat elastic, yet it quickly forms a dense and tight skin—far more dense, tight, and tenacious than the collodion of the *Pharmacopœia*. This substance, when applied sufficiently early, in many cases acts like strapping in producing abortion of the pustules, though not nearly so effectually. After many experiments, I have come to the conclusion that pressure is the main point to be relied on, and that the pressure acts by diminishing the vascularity, thus preventing the maturation of the pustules. The crusts which form after the pustules burst are best removed by poulticing; indeed, they

may almost be prevented by the application of poultices as soon as the pustules begin to burst. The poultices should be accompanied by oiling and bathing of the parts. Warm baths are especially grateful to the patient at this period, and to these baths should be added some disinfectant (Condy's fluid I generally order) to allay the fœtor which arises from many of these cases, as well as to prevent the spread of contagion. The extensive sores which form after the scales have fallen off, or when they are falling off, must be treated like burns, the boils and ulcers according to the usual surgical principles applicable to the treatment of those affections.

In conclusion, I must advise you to look into your books for other means of treating small-pox. There are many plans, and many good plans, to which I have not referred; but I only have noticed those which I believe have been most successful in my own hands, and all of which, I consider, are founded upon sound clinical principles.

THE PROVIDENT SYSTEM OF MEDICAL RELIEF FROM A NATIONAL POINT OF VIEW.*

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IN treating the question of the best mode of administering the best medical aid to certain classes of the people, we have quite as much difficulty in divesting the mind of old notions and old trains of thought as in devising new and better plans; and in an old country like ours it is not always what is best in theory, but what is most practicable, that should attract our attention and command our assent. The public have been so long accustomed to find medical aid whenever and wherever they want it, and have given so little attention as to whence it is derived or at whose cost, that they have come to consider a medical man as under a *quasi* obligation to give it on every emergency, as if there were any agreement on his part to afford it simply because he had received a licence to practise. "Go for the doctor" is uttered by everybody; if the doctor do not come he is severely blamed, but no one asks who is going to pay. If brandy be needed in an emergency, the publican is not expected to furnish it gratuitously, while the doctor is expected to give his time and skill, and very often not even to be thanked for it. These remarks of course do not apply to any who have taken an appointment, and are thereby bound to answer all demands; but it has now become a question whether those who demand this aid are by the terms of the appointment entitled to receive it. The tendency in this country is to err on the side of excess of charity, so called. This excess is clearly undesirable; for it is no true index of national prosperity, while the enormous multiplication of hospitals and dispensaries, and their aggregation in large towns, is in a high degree uneconomical. It is not my intention to go into the history of the formation of many of these institutions; but I have been too long a member of my noble profession not to know that many owe their origin, if not their existence, to a motive the reverse of real charity. It is very difficult to classify accurately the various grades, or to draw a distinct line between those people who are entitled by position and circumstances to gratuitous medical aid; and large allowances always leaning to a liberal interpretation must be made. My own former experiences in medical charities have shown me the grossest abuses of them. I have known persons who not only could afford, but actually did afford when detected, the ordinary professional fee, take their places in the out-patient room and receive gratuitously what was meant for the indigent. I have known persons test the advice given by their own paid medical man by attending at the "out-patient" room, getting an opinion, and quoting it against their attendant; nay, I have known an action commenced upon an opinion thus obtained. Abuses like these are neither frequent nor difficult to detect; the difficulty lies with those who live on the border land between moderate ability and inability to pay for medical help. Legally or morally they have no right to free medical aid; practically its denial soon sends these down to the very class who are entitled to ask it. The class of those who earn from £80 to £100 a year, the highly paid artisan receiving two guineas a week, is in large towns very numerous. I find in a paper read at the British Association last year, on the "Manual Labour Classes", that in the first class "most skilled", the number is estimated at 1,178,000, and their average earnings (less deductions for want of work) at £60 to £73 per annum. In the second, "less skilled", there are 4,009,000, with average wages of £46 to £52. In the third class, "agricultural or unskilled", there are about 3,000,000, earning from £20 to £41 per annum. This average is, I think, taken too low, when harvest and hay-sell money is reckoned. These figures include boys, women, and girls, systematically working for wages. I think,

* Read before the Metropolitan Counties Branch, March 5th, 1872.