in rare cases, to a moment's actual loss of consciousness; so that, just as epileptic attacks may occur without loss of consciousness, so sudden attacks of simple vertigo may occur with loss of consciousness. Therefore you must not rely absolutely upon such loss as a criterion of epilepsy, any more than of its absence as proof that an attack is not epileptic.

I have already spoken of the combination of minor epilepsy with hysteroid symptoms, which is often perplexing and a fertile source of error, since the spasmodic hysterical disturbance is generally by far the most obtrusive. You will, however, find any difficulty disappear if you attend to the facts I have mentioned, and especially if you remember the constancy with which such patients occasionally have some form of minor attack, without this accompaniment.

TREATMENT.

I have left myself little time to speak of the treatment of minor epilepsy. It is much less easy than the treatment of the severe form. Bromide exerts an influence on minor epilepsy with much less constancy than it does on the severe attacks. It is common for a patient to have severe attacks entirely arrested by bromide, and for the minor attacks to continue. This is not, however, always the case. Sometimes it stops the slight as well as the severe ones, and it may stop the attacks in a patient who has only the minor form. Unfortunately, we are not able to discern what will happen in any given case. In the case of all drugs and all forms of the disease, it is most difficult to discern "indications" for treatment; conditions which seem to have determined success in one case are found, in others to have no value. We can only try, and see the result. When bromide fails zinc sometimes succeeds, and after trying various forms of zinc—citrate, lactic, sulphate—I think the oxide, on the whole, gives us as good a result as any, and is better borne; although the dose that can be borne varies in different patients. Some patients are nauseated unbearably by three-grain doses, while others will take 8 or 10 grains. Borax is less useful in minor epilepsy than in the inveterate cases of severe epilepsy, in which it is often of marked service, as I pointed out when I introduced it twenty years ago. In such it is often of marked service, either alone or in combination with bromide, though it very seldom arrests attacks altogether. In the case of minor epilepsy among agents which are sometimes clearly successful—clearly so because cases in which there is no change in other elements of their condition have been benefited and even arrested—are nitro-glycerine, given three times a day, and the hydrobromate of hyoscyne, belladonna, and Indian hemp. Strychnine is occasionally of service, especially in combination with nitroglycerine.

Perseverance in effort is, above all things, necessary to do good, and especially persistence in treatment for a long time after attacks have entirely ceased. When there have been some months of freedom, the temptation to omit the inconvenient dose is strong, but it is then that the need for its continuance is greatest. The patient is then on the road to a cure, but the tendency to recurrence is then greatest, and even a single attack puts the patient again at the beginning of the long road. When the treatment is discontinued, it should always be by a gradual diminution, and not by sudden cessation. It is most important also to remember that patients who have previously had severe attacks are sure to have an early recurrence, after discontinuance of treatment, if they still have an occasional distinct minor attack, however slight.

THE OLD BECKTONIAN CLUB.—A dinner of the "Old Becktonian Club" was recently held at the Trocadero Restaurant, Mr. L. Mantell in the chair. In proposing the toast of the evening the chairman said Mr. Beckton had performed an important service to the medical profession in his long career as a "coach." The club numbered in its membership both qualified men and students; every hospital was represented in it, and it should prove a valuable link between the different schools. Mr. Beckton, in responding, expressed the deep pleasure he felt in seeing so many of his old pupils. He had a pride in remembering how many of his former pupils now occupied prominent positions in the profession.

TWO CLINICAL LECTURES ON RETENTION OF MENSTRUAL BLOOD FROM ATRESIA OF THE VAGINA

WITH SOME PRELIMINARY REMARKS ON THE INDICATIONS FOR
LOCAL EXAMINATION IN THE DISORDERS OF
MENSTRUATION.

Delivered at St. Thomas's Hospital November 14th and 17th, 1899.

By CHAS. J. CULLINGWORTH, M.D., F.R.C.P.,
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LECTURE I.

GENTLEMEN,—One of the constantly recurring difficulties of the conscientious medical practitioner is to know what his duty is in regard to a local investigation in the disorders of menstruation. The difficulty is especially pronounced when the patient is young and unmarried. The medical attendant desires, on the one hand, to avoid unnecessary examinations, and is anxious, on the other hand, not to overlook any serious local lesion, for if he is treating his patient by constitutional remedies alone when all the time the cause of the disorder is an undetected local lesion requiring local treatment for its cure, he will not only be jeopardising his own reputation, but will be doing a wrong to his patient. Is it possible then to lay down any rules for our guidance in this matter?

I have spoken, in a preceding lecture, of what I conceive to be the proper course to adopt in regard to local examination in cases of dysmenorrhœa—namely, to avoid such an examination whenever it is possible, and especially in cases where there is no reason to suspect a tumour, cicatricial contraction, or other definite local obstruction. In all ordinary cases a local examination should only be resorted to when the suffering is extremely severe and disabling, and where the usual methods of treatment have failed to afford relief. In these cases of exceptional severity an examination may be justifiable either in order to exclude, once for all, the possibility of serious local lesion, or as a preliminary to local treatment by dilatation of the uterine canal.

In cases where the menstrual disorder is in the direction of excess—cases, I mean, of menorrhagia or metrorrhagia—a prompt local investigation as to the cause of the hæmorrhage should be the rule. There is no class of cases in which delay is more liable to be dangerous. It is only necessary to remind you that hæmorrhage is almost invariably the earliest symptom of uterine cancer, and that the neglect of it is the reason why so many cases of uterine cancer are only discovered when it is too late to do any good. The neglect is often on the patient's part, but sometimes it is on the part of the medical attendant, who has failed to recognise the need for local examination. Leaving cases of cancer, however, for the moment, out of the question, the rule to institute a local examination wherever there is uterine hæmorrhage is a sound rule, for the simple reason that uterine hæmorrhage is almost always due to a local lesion. And where there is a local lesion all treatment must be haphazard until the nature of the lesion is known.

I am quite aware that the necessity for local examination in these cases is not urged quite so strongly by all teachers, but the greater my experience the more I am confirmed in the rule here laid down. The only exception I would make is in those cases where the hæmorrhage occurs at the onset of the menstrual life. It sometimes happens that the first period is alarmingly profuse. The chances in such a case are against the hæmorrhage being due to a local lesion. If the hæmorrhage, however, were repeated time after time, or if menstruation, after being normal at first, began in a year or two to be excessive, the fact of the patient being young and unmarried would not obviate the necessity for a thorough internal examination.

Only within the last few weeks, I saw in consultation a thin, pale, delicate, nervous girl, aged 18, suffering from menorrhagia. She had seen several consultants, and had had much useless treatment of a general kind. The practitioner in attendance thought that the time had arrived for a local

examination. In this opinion I entirely concurred. The girl had menstruated normally for the first three years, but for the past two years the flow had been excessive, and for the last eight weeks the loss had been almost continuous. We explained our views to the parents, and, with their consent, proceeded, after the patient had been anaesthetised, to make an examination. Finding no lesion in the vagina or cervix uteri, we dilated the uterine canal and explored the interior of the uterus. The result was that we discovered a patch of polypoid adenomata of the endometrium, which we were able to remove then and there, by means of a curette. The patient did well, and is cured of her menorrhagia.

Although in making the above remarks I have had chiefly in mind the hæmorrhages unconnected with pregnancy, the same rule holds good for hæmorrhages occurring during pregnancy, whether in the earlier or later months, and also for abnormal hæmorrhages occurring after abortion and labour. The medical attendant cannot be master of the situation in cases either of threatened or incomplete abortion, or of accidental hæmorrhage, or of hæmorrhage due to placenta prævia, or of hæmorrhage (in excess of what is normal) during the puerperium, unless he makes an internal examination.

I now come to speak of those cases of menstrual disorder which are classed under the head of amenorrhœa. These include two varieties, namely, cases of delayed menstruation, and cases in which menstruation, having been once established, has been arrested. The imperative necessity for a vaginal examination is much less here than in cases of menorrhagia. It may, indeed, be said that the cases of amenorrhœa in which an internal examination is called for are exceptional. Let me, for convenience, first take cases of arrested menstruation. Roughly speaking, such an arrest is usually due either to some obvious disturbance of the general health, or to pregnancy. In the former class the disorder of the menstrual function is secondary to the disturbance of the general health. It is merely a symptom of that disturbance. Local examination in such cases is scarcely ever necessary. It is only when there are symptoms clearly referable to the pelvic viscera that any suspicion of local mischief need be entertained. Where the amenorrhœa has begun suddenly in women or girls in apparently good health, menstruation having been normal and regular up to the time when it abruptly ceased, the medical attendant must always be alive to the possibility of pregnancy, whether the patient be married or unmarried. And if the question cannot be settled by abdominal examination a vaginal examination must be made in order to ascertain the size, consistence, and position of the uterus.

In regard to cases of delayed menstruation, a vaginal examination is to be avoided except when there is reason to suspect that the absence of menstruation is due to obstruction, caused by imperforate hymen or some other congenital malformation of the genital canal. It is of the utmost importance, therefore, to be aware of the symptoms that would justify such a suspicion. These symptoms are the occurrence, in a patient who has never menstruated, of periodical pains in and around the pelvis—the menstrual colic, as they are called—and the presence of a swelling in the lower part of the abdomen. When one or both of these symptoms are present in a girl at or beyond the age of puberty, it is reasonable to suspect that the menstrual blood is retained within the body owing to some obstruction in the passages. In such a case a local examination is imperative. The obstruction may be caused by imperforate hymen, by atresia of the vagina, or by atresia of the cervix uteri. The first of these is much the most common, and as there happens to have been a series of such cases under treatment in Adelaide Ward during the last few months, I propose reading to you the notes of them, and making such comments as the record of each case suggests:

CASE I.—The first case of the series was that of E. R., aged 13, a school-girl, who was admitted into St. Thomas's Hospital on March 12th, 1899. The notes of the case were taken by Mr. Pern. So far as her parents knew the child was quite well up to March 1st, when she was kept awake all night by pain in her back and abdomen. The pain continued severe up to the 4th inst., when a doctor was called in. On that day she was sick and vomited and for some hours she had retention of urine. The child had never menstruated, and there was no history of periodical pains.

On inspection of the abdomen, there was seen to be a rounded, cylindrical, smooth, elastic, fluctuating tumour rising out of the pelvis and reaching to the level of the umbilicus, a distance of 5½ inches. Immediately above this swelling, and inseparable from it, was a smaller and firmer tumour 3 inches long and about 2 inches wide, with its long axis

more or less vertical, but with its upper extremity lying somewhat to the left of the middle line. No fluctuation could be detected in this smaller swelling.

The vulva as a whole was bulged downwards. When the labia minora were separated so as to render visible the vaginal orifice, that orifice was seen to be completely occluded by a somewhat bulging bluish membrane about 2½ inches wide and 1½ inch from before backwards. The bulging portion of the vulva and adjacent parts involved an area 3 inches by 2½ inches in extent, and gave evidence of fluctuation. The projection beyond the angle of reflection of the thighs was estimated at about 1 inch. The anus was widely dilated, and measured 1 inch by ½ inch. There was considerable bulging backwards of the recto-vaginal septum, encroaching seriously on the lumen of the lower bowel.

On March 14th an incision was made in the occluding membrane, and a thick, viscid, dark brown fluid of the consistence of treacle flowed out, to the extent of 31 fluid ounces. No pressure was made on the abdominal swelling. The incision was then enlarged and the finger introduced into the vagina. The cavity was greatly enlarged. Its walls were destitute of rugæ, much thickened, and thrown into longitudinal folds. The os uteri could just be reached at a height estimated at about 2½ inches above the summit of the pubes. The abdominal swelling had meantime so far disappeared as to cease to be visible. The os uteri was dilated and the lips thickened. The vagina was not douched, the remains of the collection of blood being allowed to drain away into absorbent pads bound tightly over the vulva. These pads were changed every three or four hours, according to the quantity of discharge.

On the day following the operation the uterus could be felt wholly above the pubes. Two days later it had sunk so as to be indistinguishable on abdominal palpation. No rise of temperature occurred.

On the seventh day the patient was allowed to get up. The discharge had much decreased in quantity and had become light in colour. On the twelfth day it had entirely ceased. On the sixteenth day examination under anaesthesia showed the vaginal mucous membrane to be quite smooth. Both anterior vaginal and posterior vaginal walls bulged towards the canal. The os uteri remained somewhat patulous. A glass dilator was introduced and maintained *in situ* by a T bandage. Two days later the patient left the hospital, the friends being instructed to see that the dilator was inserted every night and worn till morning. The patient's mother reported a short time ago that everything was satisfactory.

It will be noticed that in this instance the patient had only just reached the average age of puberty; she was not yet 14. Yet the accumulation must have been going on for many months, for it had formed a swelling that extended upwards to the level of the umbilicus, and downwards sufficiently to produce decided bulging of the vulva and neighbouring parts, and that contained more than a pint and a-half of altered blood. The menstrual function must therefore have been established unusually early.

Another noticeable feature in the case was that no periodic pains had been complained of. The child had made no complaint, and had, so far as was known, been quite well up to within a few days of her admission. This is somewhat remarkable in view of the extent of the accumulation, and shows that the periodic occurrence of pelvic pain or discomfort is not, as is usually believed and taught, a constant symptom in cases of retention from obstruction.

With regard to the swelling itself, it is to be observed that it was produced by enormous distension of the vagina, the roof of the vagina being elevated into the abdomen to the level of the umbilicus. The uterus took little or no part. It was simply pushed up by the elevation of the vaginal roof, and was perched on the top of the swelling, a little inclined to the left of the median line. Had the accumulation remained unrelieved the uterus would no doubt in course of time have become distended as well as the vagina, and the expanded condition of the lower end of the cervix showed that this distension had in fact already commenced.

The diagram shows the effect of this variety of menstrual retention. The vagina is seen to be enormously distended, the uterus elevated, the lower part of the cervical canal expanded, the bladder elongated and compressed, the rectum encroached upon, and the anus dilated.

The contents of the swelling retained their fluidity sufficiently to give the sign of fluctuation. There was no clotting of the effused blood, and indeed in cases of retained menses there never is.

It might be expected that with such an extensive accumulation there would be such a bulging of the occluded membrane as to be immediately obvious on inspection of the vulva. This, however, is seldom the case, and was not so here. The membrane was concealed from view by the labia minora, which met over it in the middle line. It was only when the labia were drawn aside that the bluish bulging membrane occluding the vaginal orifice was disclosed to view. This is due partly to the thickness and resisting power of the occluding membrane, and partly to the depth of the hymen from the surface.

As soon as ever it is discovered that menstrual blood is being retained owing to occlusion of the vaginal orifice, means should be adopted to set it free, and to ensure against any reaccumulation. On the face of it, this seems to require but a very simple operation: a free incision, such as one employs in opening an abscess, and the adoption of some contrivance for keeping the wound open. Yet up to comparatively recent times—certainly up to a time within my own recollection—this seemingly insignificant proceeding was not infrequently followed by a fatal septicæmia, and was undertaken with a sense of painful anxiety as to the result. What was the reason of this? The retained blood, from absorption of some of its serum, acquires as it accumulates a consistence like that of thick treacle. If you pour treacle from a jug, the bulk of it will flow off, slowly and without any trouble, but even after you have inverted the jug and held it mouth downwards for some time, there will still remain a quantity of treacle adherent to the walls of the jug. You cannot completely empty it. It is the same with the vagina distended by menstrual blood. The bulk of it will escape through your incision, but some will be left behind and will require days to come away completely. This is the great source of danger. For effused blood is dead animal matter. So long as it is shut up in a closed cavity and is not infected by pathogenic micro-organisms from neighbouring parts, such as the intestinal canal, it undergoes no deleterious change. But the moment you open the cavity the conditions are altered. The slightest contamination of the residuum—that is, the portion that fails to escape at the time of incision, sets up the putrefactive process, and dead blood offers the best possible medium for the development of putrefactive bacteria. Hence it was that in the preantiseptic days, these young patients were painfully liable to succumb to blood poisoning, and hence it is that we now take more than ordinary precautions against contamination.

Fig. 1.—Hæmatocolpos from imperforate hymen; A, peritoneum; B, uterus; C, bladder.

The dread of mishap has led some operators to adopt even extreme measures for the sake of securing asepsis, such as letting off the fluid in the first instance by puncture instead of by incision, or burning an aperture by means of the thermo-

cautery or galvanic cautery, so as to avoid the raw edges of an ordinary wound. My own practice is to thoroughly disinfect the surface of the occluding membrane and the parts around, and then with a sterilised knife to make a free incision in the middle line in the axis of the vulvar opening. If the contents of the distended vagina do not escape freely, the knife may be turned half round so as to separate the edges of the incision, or a cruciform incision may be made.

There is another source of danger in operating for retention of menstrual blood, a danger perhaps more frequently associated with cases in which the obstruction is above the vaginal orifice, for example, in the vagina itself or in the cervix uteri, than with those I am now considering, but still one that it would be unwise to ignore even in operating for imperforate hymen. In a certain number of cases the fallopian tubes have been found closed at their abdominal ostia and distended with blood, and probably, owing to the sudden alteration in the relations of the parts caused by setting free the main accumulation, one of these distended tubes has occasionally burst during the operation and discharged its contents into the peritoneal cavity with disastrous results. Nothing is known as to the reason of the tubes becoming filled with blood. Some have maintained that the blood is poured out from the lining membrane of the tubes themselves; others that regurgitation takes place from the distended uterus. But whatever the source of the blood the fact remains, and the danger of rupture must be guarded against. It is best obviated by allowing the fluid to escape slowly. No measures must be adopted to hasten it beyond making a free opening. You would observe in the notes that no pressure was made on the abdomen. This precaution was taken partly to prevent a sudden and undue strain on the tubes if they happened to be distended, and partly to prevent, when the pressure is relaxed, an inrush of air into the vagina.

You will also have observed that no irrigation of the vagina was practised. In this respect my practice differs from that of many operators. It is, I believe, the usual custom to wash out the vagina with some antiseptic solution. My reasons for not doing this are: (1) That in using a douche there is always some risk of the injection of air and of the introduction of pathogenic germs; and (2) that I do not believe it possible for any douche to cleanse all the remaining blood away, and that therefore I consider it best to let it drain away naturally into absorbent pads bound tightly over the vulva by a T bandage. There is no septic material in the cavity at the moment of evacuation, and I am very jealous of any manipulation which may be the means of introducing such material. Besides, there seems to me no indication for disinfecting the interior of a cavity known to be up to that moment aseptic. The one great aim should be to prevent the entrance into it of anything which could possibly contaminate it. I have never had cause to regret the non-employment of the douche.

The after-treatment consists in keeping the patient for some days in bed, insisting on the recumbent posture except during meals (when it is good for purposes of drainage that the patient should assume the sitting position) changing the absorbent pads as frequently as the amount of discharge requires and discontinuing them as soon as it ceases, instructing the nurse gently to draw asunder the edges of the incision if the discharge should suddenly and prematurely cease to flow, and at the end of a week, or as soon as the coloured discharge has entirely ceased, introducing a vaginal rest or dilator of glass or vulcanite, and securing it in position by a T-bandage, so as to allow the raw surfaces to heal without reuniting, and to prevent adhesion of the vaginal walls. In the case before you, the discharge had ceased on the twelfth day and the dilator was introduced on the sixteenth day. When the patient left the hospital her friends were instructed to see that the dilator was worn for at least some portion of every twenty-four hours for a period of one year.

There was no rise of temperature throughout the patient's sojourn in the hospital, showing that our efforts to preserve the parts aseptic had been successful. The uterus gradually descended into its normal position, but the vaginal walls still remained much thickened and hypertrophied, presenting, now that they were collapsed, thick folds of hypertrophied tissue.

NOTE.

¹ When consulting with the artist as to the preparation of this diagram and making sketches for his guidance a difficulty arose that I had not thought of. I did not know how to deal with the utero-vesical fold of peritoneum. I had, when I came to think of it, no definite knowledge as to what became of it under these altered circumstances. I did not know, for example, whether it became lifted off the bladder, leaving the bladder in its normal position, or whether its reflection from the uterus to the bladder was retained by the gradual elongation upwards of the latter. There being no way at the moment of settling the point, I decided to omit the fold altogether rather than hazard a guess, and instructions were given accordingly. By a piece of good fortune, another case of retained menses (Case IV) was admitted the very next day, enabling me to clear up the mystery. The distended vagina formed an abdominal swelling, reaching nearly to the umbilicus, and pushing up the uterus to the same level. On introducing a sound into the bladder, I found that it passed vertically upwards to a height of $7\frac{1}{2}$ inches, its point being felt close to the umbilicus in front of the displaced uterus. The bladder had followed the fortunes of the uterus, and risen along with it. The diagram was completed accordingly.

AN ADDRESS

ON THE

POLITICAL ASPECTS OF CURRENT
MEDICAL TOPICS.

*Delivered at a Meeting of the Aberdeen, Banff, and Kincardine
Branch of the British Medical Association
on December 20th, 1899,*

By R. FARQUHARSON, M.D., M.P.,
President of the Branch.

I DEEPLY regret that political necessity, over which I had no control, compelled me to be absent from our last meeting, where I might have been more formally introduced as your President, and thanked you then, as I thank you now most cordially and sincerely, for the great honour I have received by my nomination to this chair. I will not impugn the wisdom of your choice by breathing the faintest suspicion of personal unfitness, though in some moments of absolutely confidential self-examination I have asked the question whether I can be regarded as a competent successor of the distinguished practising exponents of living and working medicine who have been my predecessors in office. But if extenuating circumstances are needed, I may plead my long connection with the British Medical Association, my intimate knowledge of its methods and its leading men, and the interest I have been able to take in public questions affecting the profession and the public through my position as Chairman of the Parliamentary Bills Committee on the one hand, and member of Parliament on the other. And this gives the clue for a text on which I may found a few brief observations. It would be manifestly absurd for me to discuss from any other point of view than learner the modern developments of our craft as it swiftly advances step by step into new regions of thought and progress; my occasional glances at our periodical literature or modern textbooks show me how hopelessly I am falling into the rear; for new diseases spring up, weird and mysterious words have been concocted to describe them, and the all-conquering bacillus has arrived to remain and disturb many of our preconceived notions. So my only chance of speaking any useful words to you to-night is to take refuge among some favourite subjects of mine—the general bearing of the science and art of medicine and surgery on the welfare of the general community, of the duty we owe to the public and the reciprocity due from them to us; of the influence of hygiene and public health administration, and of the occasional, too occasional, occupation of our rulers with the many wide questions affecting the sanitation and social well-being of the people from our more immediate standpoint.

From this somewhat extended list I think I can pick one or two items worthy of our consideration, and I shall begin with a few words on vaccination, which has recently been so vehemently discussed, and which has been made a stick to beat the backs severely, but I think undeservedly, of those medical men who are compelled by their position to take an active part in public life. We were accused of betraying the profession, playing into the hands of agitators, and practically abolishing compulsory vaccination, and really at first sight there might seem to be some faint justification for these

criticisms. I know I had many heart searchings before I threw in my lot with the supporters of the new legislation, for I could not help remembering that after the publication of the interim report of the Royal Commission I had successfully blocked Mr. Asquith's Bill for abolition of cumulative penalties. But we must go with the times, and sometimes change our opinions on the consideration of fresh evidence or a more careful review of facts, and so I somewhat reluctantly came to the conclusion that further legislation was necessary in the interest of vaccination itself. For how did the matter stand when Mr. Chaplin brought in his Bill? We had staring us in the face the report of the Royal Commission, presided over by the late Lord Herschell, and on which sat Sir James Paget, Mr. Jonathan Hutchinson, and other eminent medical men, and which after a seven years' hearing of evidence, recommended the abolition of the cumulative penalties. Then we could not take up a newspaper without seeing that the law was repeatedly and contemptuously set at defiance, that repeated prosecutions for its breach were seldom if ever attempted, and that in various parts of England vaccination had practically ceased until an outbreak of small-pox sent the strongest opponents of the practice flying helter skelter to claim its protection, the result being that in 1898, out of 900,000 children born annually, about 300,000 were being left unvaccinated, an unhealthy state of affairs, which amply justified some attempt at betterment. When the Bill was introduced last year the President of the Local Government Board proposed to leave out the conscientious objector, who had been invented by the Royal Commission, and who, as you know, is to be relieved from penalties for the non-vaccination of his children if he makes a declaration to that effect. As Mr. Chaplin reminds us in a very interesting speech delivered on December 2nd, he thought that a dangerous experiment, but Sir Walter Foster beat him in Committee; he got no support from any of the medical members, and rather than lose his Bill he loyally gave way, and the conscientious objector triumphantly took an inside seat.

Two excellent proposals met with unanimous acceptance. The first was the system of domiciliary visitation, so long adopted in Scotland, and by which a child is operated on amid the familiar surroundings of home, and not exposed to the ordeal of crowding, or shivering with cold, amid a long row of similar victims, waiting for its turn at a hospital or dispensary, and the doctor, talking to the mother quietly by her own fireside, is often able to overcome her scruples, and persuade her to afford her helpless infant an undoubted protection against one of the most terrible of all diseases.

And secondly came the calf lymph, which has at least this enormous advantage, that it is absolutely free from the possible though rare risk of communicating enthetic disease, which careless insertion has once or twice brought about, whilst if the operation is carefully performed under strict antiseptic precautions, the preservative influence of the lymph reduces the chances of erysipelas or inflammatory complications almost to zero.

The ground has, therefore, been most effectually cut from under the feet of the antivaccinationists, who have now nothing to fall back upon but vague declamation about the liberty of the subject and the tyranny of Governments; and in the face of direct physical benefit this kind of argument happily appeals to a very limited circle of minds.

The Act has not been in active operation for much more than a year, but the results are in all respects satisfactory. Mr. Chaplin, in the speech to which I have already referred, tells us that "up to the end of June last 77,000 more vaccinations had been done in the preceding six months than in the last six months before the passing of the Act, which was at the rate of more than 150,000 for the whole year. As 300,000 was the number calculated to go unvaccinated before the Act was passed, half that falling-off had been recovered in the first year of the Act, before even it was in full play. Since June there were no complete returns, but inspectors reported no falling off, with one single exception.

This, of course, is excellent; but the greatest triumph for vaccination has been at Leicester, the stronghold of opposition, with members pledged in its favour, and an elaborate and up to this point successful organisation against Jenner