stomach forced the same black fluid into the cavity, and (before the chest was opened) through the external wound. On the front of the pericardium was a small quantity of recent blood. The right lung was bound down to the pleura by some recent adhesions. On the left side of the body of the eighth or ninth dorsal vertebra, involving the head of the rib, was an irregular hole, which would admit the end of the fore finger, and which was like a carious vertebra, except that the cancellous structure into which the finger penetrated was firm and strong, and did not break down under the finger like a carious bone. On the right side of the same vertebra there was a small abscess under the pleura, as large as a walnut, containing thin dark pus; and from this point a discoloured line ran between the ribs for some distance along the corresponding intercostal space on the right. The pericardium was generally adherent to the heart. On the left of the apex of the heart, a portion of the size of a shilling was in a gangrenous state, with loss of substance the eighth of an inch in thickness; and a small, irregular, and discoloured hole in the pericardium corresponded with the sloughy part of the heart. One or two black specks upon the surface of the heart looked like granules of gunpowder. There were no traces of general peritonitis in the abdominal cavity. The liver was slightly enlarged, with a few old fibrinous adhesions to the diaphragm. The stomach was adherent to the under surface of the same muscle, and its coats gave way a little at this point, in removing it; thus enlarging an opening which had existed behind and a little to the left of the oesophageal opening. The mucous membrane of the stomach was dark and very vascular, especially around the opening, where it was also soft and sloughy.

There were no distinct traces of the passage of the first ball through the left lung; but posteriorly, one of the ribs was thick and irregular, as if a fracture had occurred, and the bone had been subsequently consolidated. A small leaden bullet was found under the body on the table; and as the body was washed out with a stream of water, and turned over after the chest had been opened, it is probable that it had rolled out at that time from the hole in the vertebra, where it had apparently been very loosely held.

This case was one of great interest throughout, and I therefore felt myself justified in reporting it minutely, especially as regards the appearances after death, the principal part of which I have transcribed from Mr. Crisp's notes. On only one occasion I questioned the patient as to the direction in which he held the pistol, and he then said that it was in the right hand with the muzzle directed obliquely downwards and to the left from the position of the external wound.

The medico-legal question is, as to whether it was intentionally inflicted or not. The coroner's verdict was "accidental death", with which I do not wish to interfere. It is, however, not very intelligible how he could have held a long pistol, as this was, in the right hand to examine the cap (as he stated) with the point directed exactly towards the apex of the heart, without turning the arm in a very inconvenient position. The presence of gunpowder in the intercostal muscles corresponding with the old scar, proves that in that case too the instrument was very close to the chest when the shot was fired.

The course taken by the second ball was evidently this: It penetrated the intercostal muscles and pleura, touched the apex of the heart, glanced across the diaphragm, cutting it sufficiently to cause inflammation, and subsequent sloughing after forming union with the stomach below, and then directly backwards to the vertebral column. When the vomiting and coughing occurred after removal of the slough from the wound, the blood that had collected in the circumscribed pleural cavity, before alluded to, came out from the wound, and after some days the slough of the diaphragm and stomach separated, and the contents of the latter organ escaped through the chest, without any wound of the abdomen, which nature had thus guarded against. He lived thirty-one days after the receipt of the injury.

ORIGINAL COMMUNICATIONS.

ON THE NON-MERCURIAL TREATMENT OF CERTAIN FORMS OF SYPHILITIC DISEASE: ANALYSIS OF 1,400 CASES.

By HENRY LEE, F.R.C.S., Surgeon to the Lock Hospital, etc.

[Read before the Medical Society of London, Nov. 10, 1855.]

As long as the treatment of disease is based upon opinion only, it can never become scientific in the proper sense of the term. The opinions of physicians and surgeons, however eminent these may be in their respective spheres, will never convince or regulate the practice of others, so long as they remain opinions only, not proved by experiment, nor supported by well ascertained facts; and for this simple reason, that an opinion, before it is established upon evidence to which all may appeal, is sure to be met by opinions of a different nature. There have not, indeed, been wanting those who have maintained that some minds have the power of intuitive perception, by means of which they at once grasp the principle of a truth without going through the laborious process of building up a theory from the separate individual facts which constitute its elements; while others have maintained that no doctrine can be sound that is not thus fairly deduced from separate facts previously ascertained.

Without wishing to confine the acquisition of ideas exclusively to either of these operations of the mind, it may confidently be affirmed that an opinion, whether true or not, can never be generally received, and maintain its influence among educated men, as a means of regulating their practice, unless they have the means of bringing its truth to the test of experience. For a short time, indeed, the influence of a great mind may lead many to yield unsuspecting submission to an ingenious theory; but, unless the truth of the doctrine be supported by accurately ascertained facts, a period is sure to come when the stability of the whole will be canvassed, and there is then danger lest some truth which the doctrine may have contained should be overlooked in the exposure of that which cannot be proved; and if, under these circumstances, any line of practice has been based upon the doctrine thus hastily established, the reaction which naturally follows its fall is apt to lead to an extreme in an opposite direction.

These general observations have an excellent illustration in the history of the treatment of syphilis. Thus, while we have such a man as the late Mr. Pearson stating, from the observation of not less than twenty thousand cases, that mercury could be safely trusted to for the cure of syphilis where that disease only was to be dealt with, we have had other men of great experience at other times stating that all forms of syphilitic disease might be cured without mercury at all. From the writings of one author then, a student might be led to give mercury in every case of syphilis which he met with; he might, by reading another author, be induced to believe that no case of syphilis ought to be thus treated. Now, in bringing these contradictory opinions to the test of experience, the first question which presents itself is, whether the authors who have advocated these different plans of treatment have observed the same class of cases; and if not, whether the different kinds of disease from which they originally took their opinions may not account for the different treatment which they appear to have been inclined to adopt, without discrimination, in all cases. If it can be shown, as I believe it may, that there are distinct morbid actions produced by the application of the syphilitic poison, differing alike in their local results and in their effect upon the constitution, then it is no longer possible to conclude that the same plan of treatment is adapted to these different conditions.

Two years ago, I had the honour of reading a paper before this Society, in which I attempted to describe four

well marked and distinct classes of cases, which were followed by very different consequences, and which required very different treatment. The first of these classes was that in which the action produced by the contact of the syphilitic matter was of the adhesive character. The secretion from the surface of the ulcer, if ulcer there be, is a more or less transparent tenacious fluid, containing comparatively few corpuscles, and those of various sizes, and with a smooth outline; not presenting, in fact, the characters of well formed pus. The second class included those cases in which the secretion from the infected part consisted of well formed pus from an early period. The third class referred to cases in which the local disease extended to the lymphatic vessels, and in which the absorbent glands consequently suppurated; and the fourth class was that in which the contact of the syphilitic matter produced mortification or phagedæna of the part to which it was applied. This last class of cases presents two varieties, namely:—

1. Those in which the application of the poison is followed by the death of a considerable portion of the tissue affected;
2. Those in which a superficial layer only is destroyed at a time.

With reference to the third class above mentioned, I stated, at the period to which I have referred, that, in looking over my notes of cases which had presented themselves during the preceding year, I had collected together and arranged in a tabular form forty-nine consecutive cases in which suppurating bubo was a symptom. Of these, five only were recorded as having had any secondary disease during the time that they remained under observation; and in three of these cases there was reason to believe that the secondary symptoms might have had reference to a previous infection; and in one case the suppuration was attributed to the strumous habit of the patient. On the other hand, I stated that, out of thirty-one consecutive cases of secondary syphilitic eruption, in only one case had there been any history of suppurating bubo, and that in this solitary case the history was not satisfactory.

Of the gentlemen who did me the honour to be present upon that occasion, some considered that I had expounded a very ingenious theory, and others, or at least one other, that I was "woefully mistaken as to my facts". To these gentlemen I feel under much obligation, as they have been the means of inducing me to appeal again to the only test of truth, namely, practical experience: and now, after the lapse of two years, during which I have seen a great additional number of syphilitic cases, I have to report that I have not seen one in which I could clearly trace that a single infection had given rise to a suppurating bubo and also to secondary symptoms. Upon this point I would wish to be distinctly understood. I do not mean to say that suppurating buboes do not occasionally occur in combination with infecting sores, but I do mean to say that in such cases they are not traceable to those sores. They may possibly depend upon some accidental concurrent cause; they may depend upon a strumous condition of system; or they may depend upon a different and generally a subsequent infection to that which gave rise to the constitutional symptoms: finally, they may appear as a part of the secondary disease.

A case recently occurred at King's College Hospital, where I mentioned to the pupils that now at last we had a case in which it appeared that a single sore had given rise to a suppurating bubo, and to well marked secondary eruption. The patient stated that this was the first and only disease that he had contracted, and I believed his statement to be true. Upon examining the opposite groin, however, there appeared a cicatrix; this, he stated, was caused by a former strain. One of two things, then, became apparent, either that his history was not correct, or else that in his particular constitution suppuration took place with extraordinary facility. The latter solution I was inclined to adopt, from the patient's having a swarthy skin, languid circulation, and dilated pupils. This instance I give as an example of the way in which, without much care, one may be deceived in collecting cases of this nature.

The principal object of the present paper is, however, not to record the impression made by unrecorded cases, which may sometimes be remembered with the most deceptive accuracy, but to bring the point to the test to which I have above referred, namely, that of practical experience; and for this purpose, Mr. Watson, the apothecary at the Lock Hospital, has, at my request, tabulated the cases which have within the last few years been recorded in the hospital books, and about one-half of which may have been under my own care. These cases are quite distinct from those above referred to, and from which I drew my deductions on a previous occasion. In this summary are included all the cases recorded, excluding only those of simple gonorrhœa; and every case which presented any doubtful point has been separately and carefully considered both by Mr. Watson and myself.

This table, then, furnishes the following results:—In nineteen books at present preserved in the hospital, the cases of 1409 in-patients are recorded. Of these—

342 were cases of primary sore, without bubo or secondary affection during the time that they remained under observation.

258 were cases of primary sores, accompanied by bubo, not followed by secondary symptoms.

508 were cases of primary sores, not accompanied by bubo, and which were followed by secondary symptoms. In this column are included cases in which the inguinal glands were enlarged, but not inflamed.

98 cases of secondary symptoms (including every affection that could possibly be classed as such) occurred, in which a suppurating bubo either preceded or accompanied the secondary symptoms.

These cases taken together make a total of 1206; and it is to the analysis of these that I wish particularly to direct the attention of the Society; but before doing so, I may briefly state that the remaining 203 cases required to complete the grand total, 1409, were as follows:—Gonorrhœa and condylomata, 87; gonorrhœa and condylomata, with bubo, 4; bubo without sores, 25; bubo without sores, followed by secondary symptoms, 2; secondary affections, in which the existence of any primary disease was positively denied, and in which there was no evidence of such having existed, 13; sloughing of penis or vagina, 54; sloughing of penis or vagina, followed by secondary symptoms, 5; returned to the hospital with secondary symptoms, having previously had primary disease without bubo, 13.

This analysis, then, furnishes us with 508 cases in which a primary sore, not accompanied by inflammatory bubo, was followed by secondary symptoms; to which might be added the 13 cases last above mentioned.

On the other hand, we have 258 cases of primary sores which were accompanied by suppurating bubo, and which were not followed by secondary symptoms. But against this large number, in which no secondary affection showed itself, there were 98 cases of secondary affection complicated with suppurating bubo. This fact might at first sight lead to the inference that in these cases the suppurating bubo was necessarily connected with the secondary symptoms: not so, however, I believe, upon a more careful consideration of these cases.

In 2 of these 98 cases, the secondary affection which showed itself was rupia, which of itself affords presumptive evidence that there had been a previous infection of the system, which was not acknowledged at the time the history was taken.

In 28 cases, the primary affection was complicated by the existence of gonorrhœa and other local diseases, which may have given rise to inflammation of the absorbents.

In 3 cases, there was great doubt as to the character of the eruption.

In 11 cases, the eruption appeared either before or at the same time with bubo.

In 3 cases, the bubo preceded the sore which was supposed to have infected the system.

In 4 cases, the bubo evidently depended upon the strumous condition of the patient's constitution.

In one case, an abscess in the prepuce complicated the primary disease, and was probably the cause of the supuration in the groin.

In 9 cases, there was either a history or some other evidence of previous disease.

In 9 cases, the history of the infecting sore was wanting.

In 5 cases, the bubo suppurated at the following dates, viz.: I, three and a half months after appearance of sore (the discharge in this case, although well formed pus, was not inoculable: the infection of the system was therefore probably due to a previous disease); II, several weeks after appearance of sore; III, three and a half months after appearance of sore; character of eruption doubtful; IV, two months after sores had healed (rupia); V, five weeks after appearance of sore; ulcer on tonsil only symptom.

In 6 cases, the constitutional symptoms appeared at the following dates after the suppurating bubo, viz.: I, eight years; II, one year ten months; III, eighteen months; IV, four and a half years; V, sixteen months; VI, eight years.

In 2 cases, there was more than one infection in each.

In 9 cases, the glands, although inflamed, did not suppurate.

If, then, these exceptions be allowed, the number of cases in which a primary sore gave rise apparently to a suppurating bubo, and to a subsequent affection of the constitution, is reduced to six—a very small proportion, it must be admitted, of the whole.

Only six cases would thus be left out of 1409 to be accounted for, and in these the occurrence of suppurating bubo might have depended either upon a strumous state of the constitution, or upon some accidental cause unnoticed at the time the histories of the cases were taken, on the one hand; or, on the other, upon the existence of previous infection, unmentioned, either by accident or design, and which would, in the ordinary course of things, have been followed by constitutional symptoms, even if the subsequent infection which gave rise to the bubo had never occurred.

The six cases above mentioned were as follows:—

1. A sore, accompanied by bubo: what kind not stated, and history imperfect.
2. Sore accompanied by suppurating bubo: not stated in the history whether any previous infection had taken place.
3. Imperfect history; bubo appeared at same time with condylomata; sore throat only constitutional symptom.
4. The history states "that enlarged glands proceeded to supuration", but does not give the date.
5. Doubtful at what period the bubo suppurated within three months of the infection: case complicated by phymosis.
6. Condylomata constituted the only secondary symptom.

This analysis will then, I think, show that those sores which infect the patient's constitution, as observed in the present day, are not often accompanied by inflammation of the absorbents; and that, when they are, this inflammation may be traced to some accidental complication: and hence it may be laid down as a practical rule, that where a primary ulcer has clearly given rise to an inflammatory bubo, there will be no infection of the patient's system from that disease; and, inasmuch as the local disease will in general heal as soon without mercury as with it, and will not be more likely in the one case than in the other to be followed by secondary symptoms, such a mode of treatment is, as a rule, unnecessary, if not injurious.

For several years past, I have adopted the plan of treating sores accompanied by inflammation of the absorbents without mercury; and, although I have occasionally seen a secondary affection supervene where there had been previous disease, or more than one infection, yet, as I have said, I have not yet met with a case in which, after this treatment, a single infection, accompanied by inflammatory bubo, was clearly followed by secondary symptoms.

In the table that I have read, fifty-nine cases are mentioned in which sloughing occurred; and in these secondary symptoms appeared in five only. This is perfectly in accordance with that which I have observed for many years

past, namely, that where the primary affection sloughs, no secondary disease is to be expected. This class of cases is generally quite distinct from that previously considered. If a part infected with syphilitic poison slough within a few days of its first application, the result is much the same as if the part had been destroyed by caustic. The poison is destroyed with the part in which it is situated. No inflammation of the lymphatic vessels follows the disease; and there is, as a rule, no infection of the general system. It must, however, be remembered in this, as in the former class of cases, that, should the sloughing be induced after the system has been infected, such an action will not prevent the constitutional disease from running its course. To this cause—namely, infection of the system, either by the same or another sore, previous to the occurrence of the sloughing—I should attribute the occurrence of the secondary symptoms in the five cases in which they are recorded in the table I have read.

A third class of sores are those which suppurate from the commencement. The histories of these cases are more difficult to obtain than those of the two former classes, because the patients apply later for advice, and are less able to furnish the information required. Whatever lack of evidence there may be with regard to this class of sores in practice, it is abundantly supplied by the very numerous instances in which artificial inoculation has been performed. In the great majority of these cases, pus has been inoculated, and a pustular sore has resulted. In none of these instances, as far as the published records are concerned, have there resulted any constitutional symptoms in addition to those which the patient may have already had, after inoculation from a primary sore, followed by suppuration. I have had a patient under observation some eighteen months, who was extensively inoculated, and who has shown during that time no secondary affection. It will appear from this, that, although inoculation, as it has commonly been practised, may in certain cases indicate the kind of poison which gave rise to the disease, it will not indicate that that disease should be treated by mercury, but rather the reverse.

When other poisons are applied to the body, if they produce at once a well formed pus, they will seldom affect the patient's system in any other way. The dissecting wounds, for instance, which at once suppurate, or are from the first accompanied by inflammation of the absorbents, are not those from which any serious mischief is to be apprehended. The process of suppuration in these cases appears to have the power of carrying off and getting rid of the poison. But, however it may be explained, I believe that it may be laid down as a practical rule in the treatment of syphilis, that a sore which suppurates early, and affords a secretion which, when placed under the microscope, shows numerous well formed pus-globules of the same size, will not be followed by secondary symptoms. Such sores, however, are very likely indeed to occur in patients who have had previous disease; and care must be taken lest they should in such instances be mistaken for the disease which originally infected the patient.

We may thus, I believe, in practice, trace three very distinct classes of cases.

1. Those accompanied by lymphatic inflammation.
2. Those in which the inflammation produced by the contact of the poison terminates in mortification, which may either be superficial or deep.
3. Those in which the poison gives rise from the commencement to suppurative inflammation.

In none of these will the patient's constitution, as a rule, be infected. It is true that medical men might treat cases presenting any of these characters with mercury, and might, as Mr. Pearson did, boast of their success. The patients doubtless will recover, but so they would if no mercury were used, and generally in an equally short space of time.

The class of cases which do require to be treated by mercury, and which, if not so treated, are followed, as a rule, by secondary symptoms, commence in a different way from

any of the three above mentioned. They do not present the usual signs of inflammation; that is to say, the part infected is not red, hot, swollen, or painful, unless, indeed, it becomes so from subsequent accidental complications. The patient's attention is first attracted by a small pimple, or a crack, or a slight abrasion, around which a slight thickening takes place, with a well defined outline. This may remain not greater in extent than a layer of parchment, or may extend to the thickness of two or three lines. The secretion from the surface consists of a kind of lymph, which contains globules of various sizes, and generally of smooth outline. Sometimes, after the first few days, there is no secretion at all from the surface of the infected part. The diseased action is in these cases indicated only by the presence of the thickening above mentioned, covered, like the surrounding parts, with epithelium. These characteristics, upon which I might enlarge, indicate that the true infecting process is going on; but, as the title of my paper was upon the non-mercurial treatment of certain forms of syphilis, I will not enter farther at present upon the consideration of that class which does require to be treated by mercury.

SINGULAR DISEASE OF THE FEMALE GENITAL ORGANS.

By JAMES HAKES, Esq., Junior Surgeon to the Liverpool Northern Hospital.

MRS. W. consulted me in November 1853, in great alarm because her medical attendant had pronounced her incurable. She was about 35 years of age, the mother of three children, the youngest about thirteen years old. For some years she had not lived with her husband, and denied ever having had illicit intercourse. About three years ago, long after her husband left her, she began to feel uneasiness about the vulva, and became subject to a purulent discharge: these have steadily increased to the present time, notwithstanding all the remedies that have been tried. When I saw her, she complained of a burning pain about the vulva, varying in intensity at different times, accompanied by a good deal of bearing down and aching about the hips, groins, and back: these were aggravated by exercise, and at the monthly periods. But what caused her the greatest distress was an inability to retain her urine while moving about; the urine itself was clear, and there was no irritability of the bladder.

I proceeded to examine her. There was so copious a discharge of matter that, till it was washed away, nothing could be seen: then the following condition of parts was noticed. External labia, nymphæ, clitoris, and prepuce, natural. When the vulva was well separated, the interval between the clitoris and orifice of vagina appeared much increased; and the mucous membrane over the greater part of this space was replaced by a cicatrix, having two or three caruncles on its surface. There was nothing like a natural urethral orifice to be seen, its situation appearing to be occupied by a mass of florid granulations, which, with one or two fleshy bodies behind it, filled up the ostium vaginae. By introducing two fingers into the vagina, its anterior wall could be easily examined; and the red mass, which was about an inch long, was seen to extend backwards, lying against the symphysis pubis. Through half its extent it was quite exposed, but the remainder was enveloped by a sheath, composed in front by the pubes, and behind by soft tissues, which separated it from the vagina. It was free throughout its extent, except posteriorly, where it was attached all round to the inside of the sheath, so that a probe was arrested at all points of its circumference, after it had passed between it and the sheath for about half an inch. It presented a smooth glistening appearance, except at its extremity, where it was slightly granular; and here was the orifice of a canal passing through its whole length, and along which a catheter passed into the bladder: there was no other channel to that viscus. When a finger was passed

into the vagina, and drawn forwards, the neck of the bladder and commencement of the urethra felt natural; but soon the finger sank into a fissure on the right side, in which the red body could be felt, proving that the sheath extended most forward on the left side.

Mrs. W., saving mental uneasiness, was in good health, and was and always had been free from any secondary syphilitic symptoms.

The appearances I have just described convinced me that this was not a case of vascular growth from the urethra, though this sometimes assumes a tubular form; and, I believed, could only be accounted for on the supposition that the ulceration, which had commenced near the clitoris, having reached the urethra, then separated the spongy portion of this canal from its other coverings, and was spreading backwards towards the bladder, the soft parts between it and the vagina having also been partly destroyed. I have known a similar result to occur in the male, ulceration commencing around the corona glandis, extending backwards so as to leave the glans, corpus spongiosum urethrae, and corpora cavernosa, completely detached from the surrounding skin of the penis. It is not improbable, therefore, however rare such an effect of ulceration may be, that the same thing may occur in the female.

I recommended the use of astringent injections and lotion, which latter was to be applied on lint, inserted between the red body and sheath; and, internally, iodide of potassium and sarsaparilla. Considerable improvement followed this treatment; the discharge of pus almost ceased; her pains were very much diminished; she could hold her water rather better; and some union appeared to have taken place to the sheath, as a probe could not be passed so far between it and the red body. After about a month's improvement, however, things remained in *statu quo*; and I determined to remove the mass by ligature. Accordingly, on the 25th of January, 1854, a thread was placed round it, so as not to close its canal. The thread became loose before the part sloughed; the separation was therefore completed with scissors. By this means, it was cut away to about a line from its origin from the sheath. The raw surface soon healed, the portion of the red mass that was left dwindling away as cicatrization progressed. The result of this treatment was entirely satisfactory.

The following August, seven months after the operation, I called upon her, and took notes of her state as follows.

August 1855. Mrs. W. feels perfectly well; is quite free from pain and discharge; can hold her water perfectly, and pass it without any difficulty; and, as far as her feelings go, she would not know that she had ever had anything the matter with her. She permitted me, however, to examine her. I found the clitoris, prepuce, and nymphæ, natural, and a cicatrix extending between them and the orifice of the urethra, which was retracted a good deal within the vagina. Instead of a trumpet-shaped orifice, there was only a transverse fissure, caused by the vaginal coverings of the urethra, which had previously assisted in forming what I have called a sheath, being closely applied against the pubes. When this fissure was opened, at its bottom was seen a red orifice, about as large as a grain of pearl barley, which was the mucous membrane of the urethra: there was no growth of any kind from it.

PARACENTESIS THORACIS: WHEN IS IT JUSTIFIABLE?

By DANIEL H. TUKE, M.D., Visiting Medical Officer to the York Retreat, Physician to the York Dispensary.

[Read before the York Medical Society, Feb. 10th, 1855.]

My attention was strongly directed, some time ago, to the subject of paracentesis thoracis, from the circumstance of being called to a little girl, for whose relief it appeared necessary to resort to the operation. Since then, I have had several opportunities of following out some interesting