

PROPOSALS  
FOR THE  
IMPROVEMENT OF DIAGNOSIS  
IN THE  
INVESTIGATION OF DISEASES OF THE UTERUS, &c.  
WITH AN ACCOUNT OF  
A NEWLY-INVENTED SPECULUM UTERI.

By PROTHEROE SMITH, Esq. M.D., Assistant-Teacher of Midwifery, St. Bartholomew's Hospital, Surgeon to the Hospital for the Diseases of Women, Consulting Accoucheur to the Central London Lying-in Institution, &c.

THE investigation of diseases peculiar to the female generative organs has, during the last few years, engaged much of the attention of the medical profession, and has already produced effects which we cannot but hail as harbingers of improvement in diagnosis, and as calculated to lead to valuable pathological results. The science of surgery, as especially applied to the examination of morbid affections of the external parts of the body, has attained to great accuracy in distinguishing physical symptoms, from the circumstance that the affected organ is at once exposed to the visual inspection as well as to the touch of the surgeon, and thus its structural condition is clearly demonstrated. In addition to these observations, I would subjoin the following remark from a late valuable Treatise on the Pathology and Treatment of Diseases of the Uterus:—"The medical science of the present day owes its superiority over that of an earlier date to no circumstance more than to the increased degree of attention which has, for a considerable time past, been devoted to the study and improvement of physical diagnosis." But I am equally desirous to affirm that advancement in the knowledge of uterine maladies has been greatly impeded by the want of that facility of investigation which arises from the simultaneous use of direct tactile examination and visual inspection of the diseased organ.

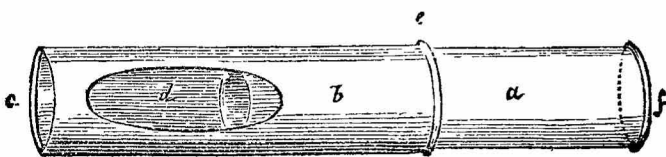
In ascertaining the physical condition of abnormal structures it is an admitted fact, that in exact proportion as we can combine these two means in pathological practice, is the accuracy of our diagnosis established. I am quite ready to admit the value of either or of both these measures, when severally applied to the end above proposed, and that, both from touch and sight, many affections of the uterus have of late been better understood and treated. I will venture, however, to express an opinion, that no one who has engaged in the investigation of uterine disease will deny that he has often been retarded in his progress by his incapability of exploring, by touch, the part when exposed to sight, or conversely, by the impossibility of procuring visual demonstration by the speculum at the same moment that he is examining the organ with his finger. Another impediment in the diagnosis of uterine pathology arises from a difficulty, which often attends

the progress of the junior members of the profession, in the application of the speculum uteri; nor, indeed, would I wish to exclude from this observation those who, from long practice, have acquired considerable facility in its use, especially as I am fortified in this opinion by the authority of one whose acknowledged talents and experience merit our unbounded confidence. Dr. James Y. Simpson, of Edinburgh, observes — "In employing the speculum uteri the principal obstacle which we have to contend with is the impossibility of always catching easily and accurately the os and cervix uteri in the upper or internal extremity of the instrument, so that these parts may be brought at once and completely within the range of sight. Indeed, the search after the cervix uteri, when it is not at first caught in the open end of the speculum, is sometimes so painful to the patient, and this part of the manipulation is occasionally so difficult to the operator, that every one who has made much use of the speculum will, I believe, be ready to confess that in some cases where the uterus is situated obliquely, or where the cervix is high and displaced, the object is almost impossible of attainment."\* I have long felt that the removal of these obstacles to the investigation of uterine disease was an object most earnestly to be sought for; and with the conviction of the inadequacy of the means now employed for the purpose of correct diagnosis, I have, for some time past, turned my attention to the subject, in the hope of suggesting some expedient to overcome the difficulties in question; and having succeeded in this endeavour, I would now wish to lay the result before the profession.

The speculum uteri alluded to in the above remarks, and which I now purpose to describe, admits of easy introduction, and permits of tactile examination prior to its application, which is readily accomplished, so that the instrument is passed into the vagina and the part required is brought into view, whilst the finger still rests upon it and accurately adjusts it to the open end of the speculum. This speculum is so simply constructed that any one, with very little practice, can adapt it so as to display the part he is desirous to see with unerring certainty, and whilst it is still exposed to sight he is enabled with his finger to investigate further the physical condition of the organ, without any difficulty or chance of disappointment. When the operator is satisfied on this point, and withdraws his finger, the instrument presents a complete cylindrical speculum uteri, whose internal surface forms a powerful reflecting mirror, which throws a strong light upon the exposed part. By the same contrivance the finger may be again admitted, whilst the speculum remains adjusted, as often as further taxis is desired. Thus the difficulty referred to by Dr. Simpson is entirely removed, whilst visual inspection, together with tactile examination, are simultaneously brought to bear upon the physical diagnosis of uterine disease.

I will now proceed to a description of the instrument, and afterwards endeavour to explain the manner in which it is most easily employed. The speculum consists of a glass cylinder, (fig. 1, *a*.) accurately fitted to an outer one of metal, (*b*.) within

Fig. 1.

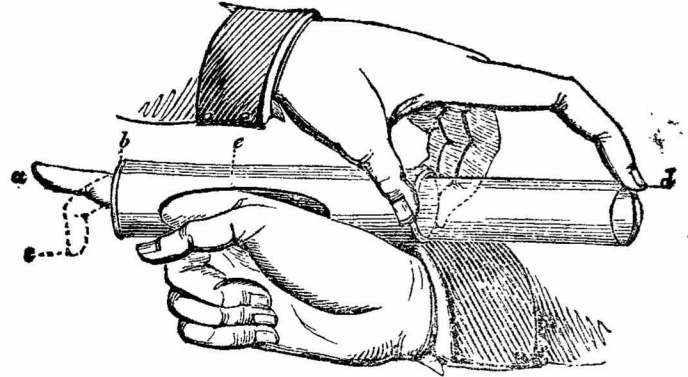


which it slides. The metallic tube has its inner surface highly polished, the reflecting powers of which are still further increased by the glass cylinder which it contains. The edge of the smaller or uterine extremity is carefully rounded into a smooth ring (*c*), which projects slightly from the inner surface, facilitating its introduction per vaginam, as also presenting a limit to the further progress of the internal tube. In its side is cut an oval aperture (*d*), of about three inches in length, and two in breadth, and extending to within half an inch of the end of the cylinder. Its other extremity terminates in a rim (*e*), which projects about a line from the external surface of the tube, having its surface blackened, for the purpose of absorbing any rays of light which might otherwise be reflected and impede the view by their dazzling effects. There is also a corresponding rim to the glass tube (*f*), by which it is more conveniently withdrawn from the metallic cylinder.

In describing the best mode of using the instrument, I would premise that the patient, during its employment, should lie horizontally on her left side, with the thighs bent upon the abdomen—the usual position in which women are placed in this country during

parturition. After the ordinary examination with the finger, the speculum, well greased, is to be held by the rim of the external tube with the thumb and middle finger of the left hand, the ring and little fingers resting on the tube, and the forefinger upon the rim of the internal tube, which is to be previously drawn from out of the former to an extent sufficient to allow the introduction of the index finger of the right hand through the oval aperture, so that its knuckle or digito-metacarpal articulation should lie in the cavity of the cylinder, (fig. 2, *e*.) The point of the forefinger

Fig. 2.



of the right hand (*a*) thus projecting from the open end of the speculum, which should be held parallel with the thighs of the patient, is carried into the vagina, the rounded edge of the tube resting on its back (*b*), and is directed towards the inferior margin of the symphysis pubis, by which movement an oblique segment of the extremity of the instrument is readily passed within the vulva and os externum vaginae, when by pressing the perineum, by flexing the first and second joints of the examining finger (*c*), and at the same time by inclining the tube backwards in the axis of the vagina, it is at once admitted within the passage, and without difficulty conveyed to the os uteri. The finger employed in effecting the introduction of the speculum having accurately adjusted its open extremity to the part to be exposed, may then be withdrawn by gently pressing against the perineum and posterior surface of the vagina, during which process the internal tube is to be passed up to its full extent by the index finger of the left hand, which rests upon it, (*d*.) In this movement, all risk of including a portion of the lining membrane of the vagina is avoided, if the finger be not wholly removed from the passage until after the inner tube is completely introduced. The operation is then concluded, and the part exhibited by the speculum must of necessity be that which had before been detected by touch. Should it afterwards be deemed expedient to feel the part exposed to sight, it may be accomplished by withdrawing the internal tube to the same extent as at first, when the examining finger may again be passed through the oval aperture above mentioned, whilst the operator is viewing through the speculum the digital examination, which process may be repeated as often as is thought necessary, without displacing or removing the instrument. This speculum is also furnished with a conical plug, to facilitate its introduction into the vagina, in

Fig. 3.



cases where circumstances occur to render the other mode at all difficult, after which it may be withdrawn, as in the ordinary cylindrical speculum, and the finger passed through the oval aperture, as already described. With the view to economize space, I have contrived, by means of a double tube, sliding like a telescope, to make the stem of the plug subserve the purpose of a porte-caustic and mop.

I have found this instrument of great use in examining the condition of the vaginal passage. With this view it should be passed per vaginam to its full extent, when by partially withdrawing the glass tube a portion of the lining membrane is seen protruding through the oval aperture into the cavity of the cylinder, when by turning it gently round, every part of the canal may be successively brought into view. Thus it has been found to be of incalculable assistance in cases of vesico-urinary fistula, when the opening through the vesico-vaginal septum is so minute as to perplex the operator, if not to elude his search. The employment of this instrument likewise renders any operation in the vagina more practicable, by the complete manner in which it

\* See also *Treatise on Diseases of the Uterus*, by Boivin and Duges, Heming's Translation, p. 33.—Lisfranc's Lectures, reported by Pauly, (*Maladies de l'Uterus d'après les Leçons Cliniques de M. Lisfranc*. Paris, 1836, pp. 59, 60; and Téallier, (*Du Cancer de la Matrice*), pp. 70, 71, &c.

exposes the part, and at the same time affords room for the movements of the surgeon.

For the application of leeches to the os and cervix uteri, or to the surface of the vagina, it is equally well adapted, so that the difficulty which at times attends the use of this remedy is hereby much diminished. To accomplish this, two fine wire-gauze tubes are supplied, similar in construction to those cups employed in leeching the surface of the body. One is adapted for the os uteri, (fig. 4,) and slides within the glass tube. The other, for

Fig. 4.



the vagina, (fig. 5,) is made to fit the outer or metallic tube, and

Fig. 5.



occupies the place of the inner one. In the former, one extremity only is open, through which the leeches, previously placed within it, are brought into immediate contact with the os tincæ, by pressing on a wire which projects from the other extremity, and which is attached to a piston, which slides within the tube. In the latter, (fig. 5,) each end is closed, but there is an oval aperture similar to that of the metallic cylinder, within which it should be placed, containing the leeches, with its opening turned in a contrary direction to that of the outer tube. The speculum may then be introduced, and the leeches applied to the affected part, by turning the tube until the two oval openings correspond. This instrument also facilitates the use of topical remedies to the uterus and vagina, so that nitrate of silver &c. may be employed with great accuracy to any given extent. This operation, as well as that of leeching, can be performed without the slightest exposure. Indeed, in the use of this speculum, the person of the patient ought never to be in any way seen, as by adjusting her dress around it, nothing externally but the free end of the tube need be brought into view. I would here desire also to remark, that in offering the above observations, I wish it to be understood that I am very far from advocating the indiscriminate use of the speculum in the investigation of uterine diseases, but simply that whenever its aid becomes essential to correct diagnosis, the instrument I have ventured to bring before the profession will be found well adapted to that end.

To the clinical teacher of pathology, I would especially address these remarks, since the instrument therein described presents him with the means of demonstrating to his pupils the various organic lesions of the parts under consideration, whilst at the same time he is enabled to point with his finger to those alterations which form the distinctive features of the disease. Thus he is able to adopt those measures for imparting knowledge which, when practicable, are considered indispensable in the investigation of every other department of pathology. These views are strikingly confirmed by Professor Simpson, in the paper from which I have already quoted. "In urging the necessity of such a physical examination of the uterus in uterine diseases, I endeavoured only to claim for that organ a means of diagnosis which, when practicable, is regarded as indispensable in the case of every other part of the system. In discriminating from each other, for example, the various kinds of morbid affections of the eye, no medical man would trust merely to the knowledge that he might acquire regarding the derangements of vision that might be present, the degree and character of the local and sympathetic pains, the quality and nature of the lachrymal and conjunctival secretions, the accompanying state of the system in general, &c.; he would further, in order to arrive at such an accurate diagnosis as would enable him to institute a rational course of treatment, examine as thoroughly as possible the local structural condition of the organ itself, as the only means of determining in what individual texture or textures, whether the conjunctiva, cornea, lens, &c., the disease was specially localized, and what the precise nature of the morbid action really was in the texture that was affected. In the same way, in a case of extensive morbid irritation of the urinary passages, no surgeon would venture to decide precisely what the extent, seat, and nature of the affection was, and whether renal vesical, or urethral, until he had made a strict local or physical examination of the urinary organs themselves. He might, by the kind of functional derangements present, be led to suppose that the morbid irritation was connected with a stone in the bladder, or an enlargement of the prostate, or a stricture of

the urethra, &c.; but he could never be perfectly certain that one or other of these was the cause, until he had instituted, with the finger, sound, &c., a local examination of the parts implicated. It is exactly the same with uterine diseases. The external symptoms may shew the presence of disease in the uterine organs, and occasionally may be such as to lead us to adopt some opinion as to its nature; but we can never, in any case of the slightest doubt, be certain of its exact character and extent, to such a degree as to serve for guides to our diagnosis, prognosis, and treatment, without we have the aid of the knowledge of the local structural state of the viscus itself."

I will now concisely recapitulate the advantages which the use of this instrument affords, of which I have had satisfactory evidence in my own experience, as well as in that of others. It offers to the profession the means of facilitating the diagnosis of the diseases of the uterus, by removing the chief impediments to the employment of the speculum—namely, the difficulty and uncertainty of its application. It enables the practitioner to expose to his view the precise part he discovers by touch, without risk of disappointment, whether it be the os and cervix uteri, or the surface of the vagina, and likewise to demonstrate it to others. It also simplifies the application of leeches and other topical remedies, without exposure of the person of the patient, and yet with unerring accuracy. And lastly, it accomplishes the object, never heretofore attained, of employing *simultaneously* both visual inspection and tactile examination in the investigation of uterine disease.

In conclusion, I am encouraged to hope that the proposals which I have herein advanced will lead to the improvement of diagnosis in a class of diseases on which much information is still wanting, will place in the hands of practitioners the means of achieving this great desideratum, which, at present, engages the attention of comparatively but a few of the profession; and that it will also aid in improving the treatment of these affections, inasmuch as precise pathological knowledge must ever tend to advance the science of therapeutics.

John-street, Bedford-row, Nov. 1844.

## USE OF THE SPECULUM VAGINÆ.

*To the Editor.*—Sir: A week or two ago I addressed a note to you on this subject. That the speculum vaginæ is a valuable instrument in the practice of medicine, both with the view of detecting the precise disease and in applying the appropriate remedies, can admit of no doubt. But it has been very properly almost excluded from practice, on account of the exposure to which it has hitherto subjected the patient. In addition to my former suggestion, I would now propose that a female attendant should be taught to place the patient in the proper position, and to spread over her a sheet, properly perforated and adjusted. In this manner the patient may be entirely and absolutely *unseen*. I need not add a word; this suggestion will be justly appreciated by the good feeling which, I am proud to say, pervades and adorns our profession. I am, Sir, your obedient servant, CENSOR.

London, Feb. 14, 1845.

P. S.—Light may be reflected from a parabolic mirror, so as to assist in viewing disease within the vagina. I may also add, that from the freedom of the very posterior part of the throat from sentient and excitor nerves, a mirror of the proper form and size may be employed to examine the condition of the rima glottidis and epiglottis. It must be pushed on at once, firmly and boldly. In this manner the irritation, which would prevent its use, is avoided—that irritation arises from a slight touch. The mirror must be first warmed to the due degree of temperature, to prevent the deposit of moisture.

\*\* Unfortunately, there are many diseases, besides uterine disease, in which exposure of the parts of the person habitually covered is unavoidable, as every region of the body is subject to numerous maladies; and, in all, the necessary inspection of the affected part must be repugnant to females. The evil, however, is unavoidable; health and life are too precious to be weighed in the scale, and it is our duty to overcome these scruples by every means in our power. We ourselves can see no more objection to the discreet use of the speculum than to that of the hand in ordinary labour; and, although convinced that the suggestion of "Censor" is prompted by the purest feelings of humanity, should not advise its adoption, as we firmly believe that any proceeding which renders a valuable means of diagnosis more difficult of application impairs its usefulness. Moreover, by pursuing such a plan it appears to us that we should shew so plainly to our patients that we consider the operation indecent, that we much doubt whether they would submit to it under any circumstance. Every man of honour, and possessing proper moral sentiments, will spare the feelings of his patient as much as possible, and his own good sense will tell him, in each case, in what way this must be done.