REMARKS ON ENDOSCOPY WITH THE ELECTRIC LIGHT.¹

By REGINALD HARRISON, F.R.C.S.,
SURGEON TO THE LIVERPOOL ROYAL INFIRMARY.

It is now twenty years since I first brought under the notice of the Liverpool Medical Society the means then at our disposal for making an ocular inspection of the bladder and urethra, in both male and female. I then demonstrated my remarks with Desormeaux's instrument as improved, so far as the illuminating power was concerned, by Dr. Cruise of Dublin. During the interval that has elapsed, endoscopy, like many other appliances in surgery, has made considerable advances, the electric light has taken the place of paraffin, and I am now enabled to show you an instrument which promises to be of much value in illuminating not only the bladder and urethra, but other parts of the body. The instrument I refer to is one which, I understand, is the work of Mr. Leiter of Vienna, though I see in *THE LANCET* of April 21st that Dr. Max Nitze of Berlin claims a priority for its invention. It consists of a plunge battery of six cells and the connecting wires, by means of which the electric current is conducted along the various instruments containing the illuminating apparatus. For the examination of the bladder we employ a hollow sound, with a miniature Swan's incandescent lamp in its extremity, by means of which an extremely powerful light is obtained. For the complete examination of the bladder two of these sounds are required, one being fitted to allow of the inspection of the anterior, and the other the posterior aspect of the viscus. The examination of the urethra and rectum is conducted in a different way; here the light is not generated at the end of the instrument, but is reflected down a tube by means of a mirror. As the light is placed for the latter purpose between the eye of the observer and the orifice of the speculum, some care is necessary in using tubes of different calibres, in seeing that the electric lamp is placed relatively to the mirror at such an angle as to throw the ray of light directly down the tube. In regulating the amount of light employed, some care in the use of the rheostat is also necessary, as if too large a charge is suddenly generated, it may result in the destruction of the little lamp. In case of such an accident happening, it is quite easy to replace the lamp without further damage to the instrument or any detriment to the patient. One of the first advantages claimed for the instrument is the safety with which it can be used. In an older instrument, which has been referred to as the Nitze-Leiter, so much heat was produced that it was necessary to provide a constant current of cold water to prevent any damage being done to the structures, and this rendered the apparatus somewhat cumbersome. Still, in spite of this inconvenience, some good work was done with it by Dr. Oberlaender of Dresden in depicting morbid appearances presented by the urethra, as you will see from the plates accompanying his paper.² In the use of the new cystoscope it is necessary that the bladder shall contain five or six ounces of clear water; this allows of the instrument being manipulated with perfect safety, whereas if the lamp is burned in the air, or in a space not thus protected, it becomes hot. One obstacle to the successful use of the instrument in the bladder is the liability of the injected water to become tinged with blood. When this is the case the instrument must be removed and fresh water introduced until all blood staining has ceased. As it is in doubtful cases of vesical hæmaturia that electric endoscopy is likely to be of considerable service, I am endeavouring, with the assistance of Mr. Schall, of Wigmore-street, to arrange so that the bladder may be irrigated and refilled with water, when the latter by any cause loses its transparency, without removing the cystoscope from the bladder. This is an important point, which I hope to secure, as the use of the endoscope as an instrument of precision will thereby be much enhanced. There is one other source of difficulty I have encountered in the examination of the bladder, and that occasionally arises from the inability of the latter to contain a sufficient quantity of injected water for the convenient use of the instrument. In one instance which has

come under my notice this difficulty was considerably got over by first injecting the bladder with a 10 per cent. solution of cocaine.

Speaking generally of electric endoscopy, I think its chief value will be found, not in supplanting other means of diagnosis, but in providing the additional link which in certain cases is necessary to make the chain of evidence complete. Take, for instance, a case of hæmaturia, where we have good reasons for concluding the blood comes from the bladder. Though we may believe that the source of this is a tumour of some kind, we are quite unable to come to a positive conclusion upon this point until we either discover it by the microscopic examination of a portion of the growth which has been accidentally discharged, or until the interior of the bladder has been explored by the finger. With the electric endoscope, I have not the least doubt that, in the great majority of cases where hæmorrhage proceeds from a vesical growth, the source of the bleeding may be discovered at an early period of its occurrence, and not, as it now often happens, until the disease has made considerable progress. Again, we not unfrequently meet with cases where, with much functional disturbance of the bladder, more or less pus is contained in acid and otherwise healthy urine. Here the new endoscope will often be of service in showing us ulcerous and tuberculous surfaces within the bladder, which previously we had no means of actually demonstrating. In the diagnosis and treatment of stone and stricture of the urethra I do not think there is much left for endoscopy to do. If the sense of touch is not sufficient to enable the surgeon to detect the presence of a calculus in the bladder, or to manipulate an instrument through a tight stricture, I do not believe he will be likely to derive much assistance from the endoscope. Whether seeing under such circumstances would enhance the value of educated feeling I very much doubt. In some chronic forms of urethritis I have found that diagnosis and treatment may both be essentially aided by ocular inspection of the part, and by the facilities the endoscope affords for making direct applications to diseased surfaces. In these directions I venture to predict that electric endoscopy will be found, in conjunction with other approved appliances, of service to the practical surgeon.

ON THE TREATMENT OF EARLY EXTRA-UTERINE GESTATION.¹

By G. ERNEST HERMAN, M.B. LOND., F.R.C.P.,
OBSTETRIC PHYSICIAN TO THE LONDON HOSPITAL, ETC.

THE great difficulty in the decision as to the early treatment of extra-uterine gestation is the extreme uncertainty of diagnosis. It is necessary, in considering each plan of treatment, to weigh carefully what will be its result if the diagnosis be incorrect. This uncertainty of diagnosis, of course, affects also prognosis. Were we to confine ourselves to cases in which the diagnosis has been verified, either by post-mortem examination or by abdominal section, we should conclude that extra-uterine gestation was one of the most fatal diseases known. There may, however, be cases in which rupture takes place, but hæmorrhage spontaneously ceases, and the foetus and the effused blood are ultimately absorbed. Leopold² experimented on animals by opening the uterus and turning the embryos out into the peritoneum, and he found that absorption took place. A very early foetus may be dissolved in the liquor amnii. Smellie³ describes such a case, in which the amnion was expelled separately from the chorion, and the foetus could be seen inside it. After being kept for twelve hours most of the foetus was found to have been dissolved. A case has been reported by Dr. Petch in which a foetus so advanced that the foetal heart was heard, died, and was almost completely absorbed. Among the cases operated on by Mr. Lawson Tait, out of twenty of which I have been able to find published details, there are six in which a placenta but no foetus was found—a proportion surely too large to be accounted for simply by supposing that the operator over-

¹ Read before the Liverpool Medical Institution, April 26th, 1888.

² Vierteljahreschrift für Dermatologie und Syphilis. Wien, 1887.

¹ Read before the Hunterian Society.

² Arch. für Gyn., Band xviii., S. 53.

³ Midwifery, New Syd. Soc. Ed., vol. ii., p. 66.