

CLINICAL LECTURES ON SURGERY.

DELIVERED BY

DR. CIVIALE,

AT THE HOPITAL NECKAR, PARIS.

TRANSLATED FROM THE FRENCH

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On the employment of caustics in the treatment of strictures of the urethra, with a description of instruments for applying the caustic.

CAUTERIZATION of the urethra is a very ancient operation. It has been employed sometimes as a general method, sometimes when other means have failed, and the occasions of using it have not been rare, since one of the principal characters of strictures is to resist all efforts to combat them. Adopted, abandoned, and again resumed, this practice would seem at present to be in entire discredit. Nevertheless, it appears to me to be useful to indicate the principal modes of practising it, and again to draw attention to the value of this means, whether of cauterizing strictures of the urethra from before backwards, from within outwards, or from behind forwards. In the first of these procedures, adopted by the ancients, and which numbers Hunter and Horne amongst its partisans, the caustic acts from before backwards on the part of the urethra which precedes the contraction, and it attacks no less the circumference of the contracted point than the coarctation itself. It also is attended often by accidents which some moderns have endeavoured to obviate, but without much success. Those who adopt it proceed without guide and without precision. However, if so many efforts have not succeeded in effacing the inherent defects of the method, they have at least contributed to moderate the enthusiasm which it had at first inspired. The dangers and want of success could not be concealed, and cauterization gradually fell into disrepute.

By some ancient proceeding strictures were attacked from within outwards, but it is only of late that Mr. Arnott in England, and Ducamp in France, have regulated this procedure, and have bestowed on it all the precision desirable, at least in theory. The method of Ducamp is known; the author has given a very lucid exposition of it; everything, so to speak, appears mathematical; but it is not so by the bed-side of the patient.

Convinced of the defects of the porte-caustique of Ducamp, I endeavoured to remedy them by giving greater length to the part of the instrument which goes beyond the cuvette, provided that I was well assured of having entirely traversed the obstacle, before causing the nitrate of silver to project from the conductor. I employed, at first, a metallic instrument, but afterwards I knew that the flexible sound was preferable. My porte-caustique (*see* plate 1) occupies, so to speak, the middle of it. That part of the sound which projects beyond it is at least an inch in length. The length of the opposite end is not so constant; it extends, generally, to eight inches. The smallest porte-caustiques have a diameter of three-fourths of a line. Their flexibility admits of their yielding to all the necessary movements. The conductors which I employ are very simple, and formed of elastic gum; sometimes straight, and sometimes curved, according to the situation of the stricture; they are seven inches in length, and from two to three lines in diameter, and, like most instruments of this description, they have a graduated scale, which serves as a guide to the manipulations. The anterior opening is always proportioned to the volume of the porte-caustique, which fills it without being tight.

These instruments, the most simple in construction that have been proposed, are equally so in application. The only difficulty consists in contriving that the extremity of the porte-caustique is completely introduced into the constricted point at the moment when it protrudes from the conductor. This is effected sometimes by proceeding with great gentleness, and by very gentle pressure, accompanied by a slight traction of the penis. There is no fear of the caustic dissolving and acting on the urethra before the stricture, for it is ascertained with certainty that the obstacle has been passed, before even that the nitrate of silver approaches the extremity of the conductor accurately filled by the porte-caustique. But very few attempts suffice to produce the desired effect.

Sometimes we cannot succeed in engaging the smallest
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porte-caustique into the contracted point, notwithstanding our repeated efforts, whether by modifying the manœuvres, or by employing different conductors, with central or lateral openings. The porte-caustique only protrudes from the conductor to the extent of two or three lines. This slight protrusion, which is sufficient to lead into error when the instrument of Ducamp is used, or the cauterizing sound, cannot, with the instrument I employ, lead to any mistake. It is to this happy circumstance that I attribute my never having made a false passage, nor observed those severe accidents which the application of the caustic in other hands, and by other methods, has produced.

The ancients cauterized with the view of destroying excrescences, to which they attributed most contractions. With other views, the moderns have recourse to the same means to remove the obstacle to the flow of urine. This obstacle varies according to its nature, its extent, its consistence, the place which it occupies, the period of its existence, and the texture of the region of the urethra where it is situated. This consideration alone suffices to cause distrust of the opinions which we daily see given in so precipitate a manner.

If we isolate the action of the caustic from all foreign influence, whether of the proceeding itself, or of the manner of its application, the following are the phenomena which it presents:—

1st. A patient has an incipient coarctation, consisting of a simple bridle, occupying one side of the urethra, concerning which the explorative sound, and especially the bougie, have furnished the precise information. A slight application of the caustic is made. The pain is slight, and of short duration, and no immediate accident occurs; the patient passes his urine better than before the first time that he presents himself, and complains only of slight smarting. A mild form of urethritis is manifest. The contraction has disappeared, to a great extent, at least, and a tolerably large bougie can be passed, the introduction of which was before impossible. A multitude of facts attest this result.

2nd. If the coarctation is more considerable, and the tissues are more indurated, provided the exploration furnishes an equally positive diagnosis, the action of the caustic will be equally favourable after a first, a second, or, perhaps, a third application, provided the applications are made gently, and are not continued, and that the new application is made many days after the falling of the eschar.

3rd. When the contraction is still greater, the action of the caustic is different, although we may have obtained the most exact impressions, and been enabled to give the same degree of precision to the procedure. There is not often much amelioration after the first application, still less after the second, and none after the third. If we persist, the amelioration obtained at first soon disappears, and the condition of the patient becomes more serious than ever. Sometimes there is an abundant mucous discharge from the urethra; the emission of urine is accomplished with pain; there is general uneasiness, sometimes fever, and a distressing state of nervous derangement, and the patient sinks. Sometimes, even, the immediate accidents are more serious, such as hæmorrhage, strangury, severe pain, &c.

The frequency, nay, almost constancy, with which these phenomena occur in each of these three cases, have appeared to warrant the conclusion, that the caustic destroys, without return, those strictures which consist only in a simple bridle; and if the destruction were less complete in the more severe cases, it would still be sufficient to account for the amelioration observed. It has appeared also quite natural to attribute the absence or the manifestation of accidents to the greater or less precision adopted in the use of the caustic. But a fourth case, which is also by no means of rare occurrence, has convinced me that this explanation is of no value.

4th. When many strictures exist at the same time, one of which, situated at the navicular fossa, or at the spongy portion of the urethra, is sufficiently great to prevent our arriving at the others, if we cauterize the first obstacle, a marked amelioration follows, and the flow of urine becomes easier than before, although the next stricture has not been attacked, which, nevertheless, is almost always the more considerable.

I confess I was never able to explain this circumstance, which I have often witnessed; but it is not only after the destruction of the constricted point by prudent and methodic measures that it is observed, but also after a mode of procedure, generally condemned, of cauterization from before backwards, after which there is speedily observed an improvement, such as to induce the belief that a single application has destroyed the obstacle, although it has not. In connecting

these facts, and perceiving that the amelioration was scarcely ever permanent, I am compelled to acknowledge that the action of the caustic is not thoroughly understood.

The nitrate of silver, therefore, does not produce in the urinary canal the effects which are generally attributed to it. Two principal causes have contributed to mislead in this respect.

1st. Practitioners have been led into error by the abundant discharge, but which is not merely from eschars, but consists also of mucus of the urethra, altered by the caustic, and by the coagulable lymph secreted in consequence of the inflammation.

2nd. They have been misled sometimes by the means of exploration, which induced the belief that the obstacle was greater than it really was, sometimes by the dilatibility of certain contractions, which led to the mistaking constrictions purely spasmodic, or simple deviations of the canal, for true organic coarctations.

It has been admitted, without reflection, that the nitrate of silver acts solely by its escharotic power: for if each application produced, as has been alleged, a considerable loss of substance, the internal membrane of the urethra ought always to be destroyed, and the parieties of the canal to disappear altogether, when using as many as a hundred cauterizations. Moreover, on one side the obstacle does not depend on a tissue accidentally developed on the surface of the membrane, as it is necessary it should do, in order that the efficacy of the caustic might be attributed to the destruction of this false membrane; but it depends on the alteration of the tissues which it covers, and which the nitrate of silver cannot reach until it has caused this obstacle to disappear entirely.

Finally, post-mortem examinations have shown, as I have repeatedly witnessed, that the action of the caustic does not leave any traces on the surface of the canal, and that the alterations which are met with appear to be quite independent of it.

The part which has been touched by the caustic reddens and swells. A layer of grey, or dirty-white substance, forms on its surface, which falls off from the second to the fourth day, and sometimes much later, even as late as the fifteenth. The first effects of this are, a modification of the sensibility, an increase of the capillary circulation, a circumscribed phlegmasia, but sufficient, it is thought, to soften the point upon which the nitrate of silver has been applied. So long as this is confined to modifying the vital properties, the results are favourable; but this is only whilst there exists a certain connexion between one state of the disease and the action of the modification, for they take a very different turn so soon as the sensibility effects another rhythm, or that we wish to produce more than a change of the local vitality.

With regard to the opinions which have been given of the sensations which accompany the application of the caustic, I shall only remark, that in certain cases the patients suffer but little, as is proved in numerous instances; others suffer considerably. I will here give the principal circumstances of the two remarkable facts on the subject of the sensation produced by urethral cauterization.

A patient presented himself at the Hôpital Necker, imagining himself to be affected with stone. Repeated explorations convinced me that the accidents were the consequence of small excrescences at the neck of the bladder, against which I have frequently employed *transcurrent* cauterization with success, by means of escharotic bougies. I had recourse to these means in this patient: one day, in place of the bougie which I had used on many former occasions, the pupil gave me one prepared recently: after anointing it with cerate, I introduced it rapidly. It had scarcely penetrated three inches when the patient stopped my hand; I withdrew the bougie immediately, in consequence of the severe suffering occasioned, and which continued for several hours. A bath and cataplasms alleviated the pain, but all that portion of the urethra with which the bougie had come in contact so momentarily became the seat of intense inflammation; a greyish crust was formed, which the patient began to void, but which persisted for five days at the urinary meatus. When the inflammation and pain had entirely disappeared, I introduced some simple bougies, to subdue the roughness which generally follows in these cases. Reflecting on what had just occurred,—on the excessive pain which the patient experienced, on the subsequent inflammation, and comparing these phenomena with the short space of time during which the caustic had touched the urethra,—I easily comprehended, that in ordinary circumstances we do not really cauterize at all, and the caustic is lost, either in the instruments or in the midst of the mucus of the urethra. About the same time, I had in my service a woman attacked

with an obstinate neuralgia of the urethra, against which I employed caustic: one cauterization a little too strong produced accidents analogous to those already described.

Another case was attended by circumstances of high interest. In 1839 I was consulted by an American afflicted with a malady of the urinary passages, more imaginary than real. This patient, fearing that he had contracted syphilis, underwent a long treatment; but there remained a slight discharge, which simply glued the meatus without soiling the linen. This slight running distressed him to that degree, that he determined on coming to France to complete the cure. A stricture was suspected, and after a consultation, it was decided that recourse should be had to cauterization by means of a bougie rolled in pulverized nitrate of silver. The patient afterwards showed me this bougie, which, although it had been used, was still covered with a thick layer of caustic. It had been introduced into the canal, and kept there some seconds. Shortly after its withdrawal the patient commenced to suffer excruciatingly, notwithstanding every soothing treatment. At different times the patient was obliged to pass several hours in an emollient bath. The symptoms at length abated in severity, and the flow of urine was restored; but the patient was alarmed at perceiving a real tube, many inches in length, escape, which was expelled with difficulty by the contractions of the bladder and the flow of urine. It was imagined, at first, to be the internal membrane of the urethra. Many other fragments, like the fingers of a glove, escaped also on the following days. I assured the patient that his fears had been devoid of the foundation which his imagination had represented, but I did not omit to apprise him, that after such a cauterization the parieties of the urethra would preserve a rigidity which would more or less incommode the expulsion of the urine, and especially the power of erection, besides being a powerful cause of strictures of the most serious kind. In fact, he had already remarked, that the bougies he had used previous to the cauterization could no longer pass, and that he was obliged to employ smaller ones. Some time afterwards, I saw him, in consultation with M. Bérard, who agreed with me in opinion, and undertook the treatment of temporary dilatation. It is to be feared, that the patient will be attacked by a callous stricture of the spongy portion of the urethra, for in such cases the cure is seldom complete, and relapse highly probable.

I have quoted these two facts with the view of showing the sad consequences which the caustic may produce when it has really been brought in contact with the parieties of the urethra.

In resuming what has been said, we see, that in the case of simple bridled stricture, the action of the caustic is highly satisfactory.

A first cauterization is equally efficacious in certain more severe cases. But if now and then we obtain still further success by repetition, a period always arrives when the amelioration first observed subsides, and although the applications are then multiplied, the patient no longer passes his urine with facility. Often even the benefit derived in the first instance disappears after many months of treatment. Such is the case especially when the strictures are long and callous.

When the coarctations are considerable, and the urethra admits with difficulty the extremity of a very delicate bougie, it is seldom that we can obtain an impression with the explorative sound, liable, also, to lead into error; and it is still more rare that the porte-caustique can pass the obstacle. In these cases, which are frequent, we must renounce the caustic, or apply it from before backwards.

The application, then, of the caustic, ought to be confined to the cases in which the contraction is linear, the point which it occupies sufficiently dilatible to admit the porte-caustique, and to allow of an exact impression of the coarctation. The result thus obtained serves as a guide, and so soon as the amelioration no longer progresses, we discontinue the use of the caustic, which could now only prove injurious, to resort to other means.

Whenever this rational procedure is departed from, the most serious disorders arise. Without speaking of false passages, which are frequent, and may lead to infiltration of urine, (an accident of which Sir Charles Bell has quoted an example;) without speaking of inflammations of the bladder, or of hæmorrhages and retention of urine, which have led so many practitioners to renounce cauterization altogether, the action of the nitrate of silver in the canal has other inconveniences which ought not to be overlooked,—I allude to the thickening of the parieties of the urethra, and the morbid phenomena which consecutively take place in the genital organs.

Many patients in whom numerous cauterizations have been

practised, still have great difficulty in passing their urine, although their urethras admit of sounds of large calibre. The constriction which bougies sustain in these cases, shows how much rigidity the canal has acquired. An attentive examination shows inequalities, cicatrices, indurations more or less extensive, on the points acted upon by the caustic. I have seen these indurations occupy almost the whole of the moveable part of the urethra, the parieties of which had acquired such thickness that great efforts were required to introduce the sound, and greater still to withdraw it after remaining in some time. In these cases, the soft bougies convey often an impression which leaves no doubt of the existence of the lesion, and the patient almost always suffers when an instrument passes the disorganized part of the canal.

A urethral discharge, sometimes copious, frequently accompanies the morbid condition to which I have alluded. Some patients experience severe pains, either at the neck or at the internal surface of the bladder, at the prostate, the vesiculæ seminales, the spermatic cords, or in the testicles themselves, and are seized with absolute impotence. In a word, we see developed, as the sequel of repeated cauterizations of the urethra, the long series of accidents which usually succeed all the deep lesions of this canal. The patient often becomes so irritable that the sight only of an instrument makes him shudder, and his condition is now beyond the reach of art.

Note.—With reference to the above lecture, Dr. Civiale remarks as follows:—"Il s'agit d'un sujet important, et que le deviendra davantage par suite de deux articles que je vous adresserai bientôt sur l'urétrotomie, et dont celui-ci fait l'introduction."

EXPLANATION OF THE PLATES.

PLATE 1,

Representing the different instruments for applying the "Porte-Caustique" in the urethra.

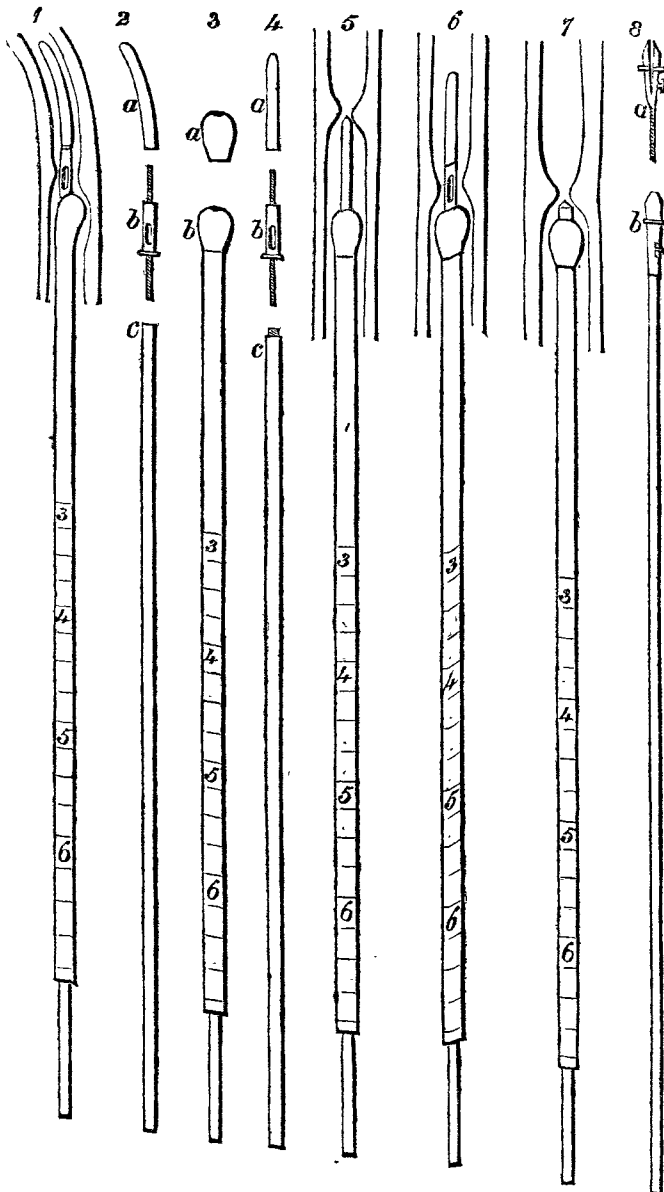


Fig. 1.—Section of a portion of the urethra, with a stricture in which a "porte-caustique" has been introduced. The conductor, without a metallic socket, presents an eminence which is often useful, when the obstacle exists at the bulbous portion of the canal.

Fig. 2.—The three pieces which form the "porte-caustique;" *a*, the part which ought to traverse the obstacle before the nitrate of silver comes out from the conductor; *b*, the porte-caustique; *c*, the bougie, at the extremity of which it is fixed. These three pieces are united by two long screws.

Fig. 3.—A conductor with its socket; represented alone, *a*, and fixed upon the flexible canula, *b*.

Fig. 4.—Bougie porte-caustique; *a*, *b*, *c*, are the three portions which compose it—they are re-united by two screws.

Fig. 5.—Section of the urethra, with a contraction, in which the bougie porte-caustique is about to enter.

Fig. 6.—The same section; the obstacle is seen traversed by the extremity of the bougie, and the caustic applied to the contracted point.

Fig. 7.—Another section of the urethra, with a contraction, in which it is impossible to introduce the instrument. Here the nitrate of silver acts from before backwards, by means of the porte-caustique represented *a*; the figure 8 shows the same porte-caustique fixed to the extremity of a bougie, *b*.

The ciphers traced upon the conductors show the length of these instruments, and the space they pass in the urethra, before arriving at the contraction.

The small collars represented on the porte-caustique prevent these from going out of the socket of the conductors.

PLATE 2.

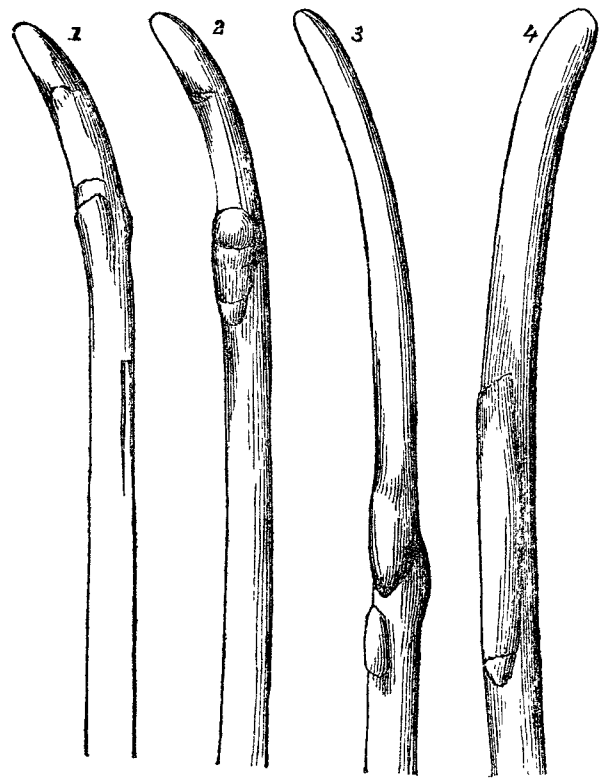


Fig. 1.—Bougie, showing the impression of a long stricture, situated at the bend of the urethra, the dilatation of which was far advanced; the contracted point has acted on the wax with such force as to preserve the impression on the bougie in a very distinct manner.

Fig. 2.—Another impression of a very long contraction situated at the curvature, and the dilatation of which was in a very advanced state. This contraction, as well as that shown in figure 1, occupied the superior face of the canal. Below, the bougie was not depressed. Upon these bougies, as well as on many others, the wax is seen rolled back by the contraction, as though it were by a wire drawing-iron; but what expresses, above all, the contraction of the strictured point upon the bougie during its abode in the bladder, is the border which is remarked on the extremity of the bougie beyond the contraction, and which, at the moment of extraction, has been able to traverse this without being altered in form.

Fig. 3.—A long stricture, situated at the spongy portion of the urethra, and already partially dilated. The bougie, introduced with force, after remaining for half an hour, showed the impression here indicated.

Fig. 4.—A remarkable impression, which constitutes a considerable depression of the inferior pariety of the spongy portion of the urethra, near the bulb. The patient complained of some distress in making water, but he had no stricture, properly so called. There was nothing apparent capable of explaining this anomaly, of which many bougies retained the impression.

ST. BARTHOLOMEW'S HOSPITAL.

REPORTS FROM THE MEDICAL PRACTICE OF THIS HOSPITAL.

By E. L. ORMEROD, M.B., Cambridge,

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JAUNDICE FROM AN ENCEPHALOID TUMOUR OBSTRUCTING THE HEPATIC DUCT; DISSECTION; REMARKS ON THE SOURCE OF THE HÆMORRHAGE.

Rose Ann B—, aged twenty-seven, admitted October 4th, 1845, Faith Back Ward, under Dr. Burrows. Dull, heavy expression; conjunctivæ and skin generally of an intensely-deep jaundiced hue; pulse 96, full, and soft; tongue dry, and brown down the centre, pale at the edges; gums spongy, soft, and bleeding at the least touch. Bowels relaxed; the motions deeply stained with blood, if not wholly composed of it. Abdomen full, soft, tolerant of all but severe pressure, which causes much pain in the right hypochondrium; urine free, high-coloured; has jaundice of three months, with drowsiness, weakness, and violent hæmorrhage from the mouth, nose, and alimentary canal.

History.—Married, temperate; has always had delicate health, the catamenia having never been properly established. Three months ago, she had a fall, which alarmed her a good deal. The next morning, the surface of the body had become jaundiced, and has continued so ever since. Nine days ago, she had a rigor, followed by reaction; and from that time she has had oozing of blood from the gums, with epistaxis, yesterday, to a large amount. The alvine evacuations, which were at first clay-coloured, have latterly been much darker. The urine is abundant and high-coloured. She has been treated by purgatives.

Oct. 5th.—She was yesterday ordered five grains of chloride of mercury. During the night she was restless, constantly moaning. Bowels open several times, motions of pure blood; pulse 116, feeble; extremities cold; tongue dry, and brown. She is drowsy, but quite intelligent when roused. She gradually became comatose,—pulse 114, more and more feeble,—and died in the course of the afternoon, having passed a large quantity of blood in the bed just before death. The body was examined twenty hours after death: it was much loaded with fat; the limbs were rigid, the blood generally was fluid. The brain was not examined. The lungs were small, well collapsed; the tissues stained with bile. The heart was small, and generally healthy; the right side of the pericardial surface of the right auricle was crusted over with little dots of coagulable lymph, the remains of the pericarditis. The stomach was full of bloody mucus, the mucous membrane generally *mamellonnée*, but in other respects healthy. The intestines, both small and large, were full of dark fluid blood; their coats emphysematous in parts, and stained by the bloody fluid; in other parts, this discoloration was confined to the valvulæ conniventes, which, throughout the whole length of the canal, were much loaded with blood. In the duodenum was a soft, round mass, about the size of a walnut-shell, white and pulpy, growing from, and apparently quite obliterating, the orifice of the common duct. The liver was large, reaching up to the third rib, of a dark, dirty-green colour; beyond this, the only thing to be remarked was the enormous size of the ductus cysticus and ductus communis choledochus, either of which readily admitted the little finger, their cavity being full of fluid bile. The gall-bladder itself was healthy; the pancreas and pancreatic duct presented nothing abnormal. The kidneys were natural in size, pale, yellow, beset with numerous small red ecchymoses; their structure was apparently healthy. In this case, again, the blood was fluid, while the rigor mortis was marked as usual, illustrating the fact, that not only may rigor come on before the blood coagulates, but also in cases where the blood is not of a nature to coagulate at all. It is to be doubted whether the blood would have coagulated in the case just related had it been let out of the body eight hours after death, as in the previous case. But the point of greatest interest is the consideration of the source of the hæmorrhage; for neither can this, any more than the previous case, be considered as a case of jaundice running on to a fatal

termination simply by the effects of the functional affection of the liver, uncomplicated by their reaction on particular parts of the body: the hæmorrhage was here, to all appearance, the immediate cause of death.

It seems that this hæmorrhagic tendency was not developed till after the jaundice had existed for some time. The rigor, nine days previous to admission, whatever may have been its physiological meaning, gives a point whence to date a new series of symptoms, formidable enough in themselves, more so in connexion with their abiding cause. There can be little doubt that the hæmorrhage was purely constitutional,—the case forbids us to admit so many local origins,—whether the essential nature of the hæmorrhage consisted in integral changes in the blood, or in the texture of the tissues of the body generally. The known effects of admixture of bile with blood out of the body in dissolving all the blood corpuscles, (Simon, *Med. Chemie*, bd. ii., *seite* 24,) would incline to the former belief; indeed, it is a problem how such an event is not commonly met with in jaundice—how the colouring matter is separated from the more noxious ingredients of the bile.

The next question is—Being constitutional, was not more blood likely to flow from a part notoriously liable to hæmorrhage—such as a malignant tumour on a mucous surface—than from the rest of that mucous surface? Did the patient die of bleeding from the tumour in the duodenum, or from the whole length of the alimentary canal? The hæmorrhage from the mouth and nose was severe, it is true, but nothing compared to the profuse discharges from the bowels.

In answer—As on most other pathological questions, the evidence is incomplete in the particular case, but the link is supplied by other cases* where hæmorrhage occurred independent of any malignant growth. Still, the facts of the case before us will bear examination: the discoloration was not simply such, there was actual increase of vascularity; the vascularity was not dependent on gravitation, for it was diffused over the whole canal, yet not uniformly, for the valvulæ conniventes were preëminently loaded with blood; the tumour itself was pale, and not then loaded with blood, equivocal though the nature of this last fact may be. And lastly, it remains to be shown whether a cause affecting a healthy structure in a peculiar way is apt to affect a morbid structure, already so predisposed, in a direct ratio to its peculiar predispositions: the evidence of the present case, so far as concerns the malignant tumour itself, inclines to quite a contrary supposition.

UNIVERSITY COLLEGE HOSPITAL.

REPORTS FROM THE MEDICAL PRACTICE OF THIS HOSPITAL.

By EDWARD COUSINS, Esq., M.R.C.S.

ANEURISM OF THE ABDOMINAL AORTA; NO MORBID SOUND.—DEATH BY HÆMORRHAGE.—REMARKS.

Joseph C—, aged sixty-six, admitted under Dr. Taylor, April 11th, 1846; of short stature, moderate conformation, pale complexion, lymphatic temperament; a smith, never much overworked, not often out of work; married; of temperate habits, having a sufficiency of good food, but being very badly clad; always much exposed to wet and cold, and (from his occupation) to great alterations of temperature; when wet he had not a change of clothes. For the last sixteen years he has been living in a very confined, damp, unhealthy neighbourhood; his health and muscular development habitually good. He has suffered twice severely from acute rheumatism at periods of twenty and eighteen years ago, and since then, until now, he has occasionally been attacked with rheumatic pains.

About eighteen months ago, shortly after dining, he one day felt pain at the crest of the right ilium, which became so severe in three or four days that he could not stoop, nor could he dress or undress himself. It is a constant gnawing pain, and is still felt; when worse, it is like the pricking of a knife, and much increased when he draws his breath. He did not perceive any change in his general health. About five months ago whilst employed on a large bar of iron, he threw back his head to see if it was straight, and he then felt a sharp pricking pain at the upper part of his abdomen, for a moment only. At bedtime he found in this position a rather hard spot, of the size of a dollar, which was not painful. He did not notice

* See especially *Guy's Hospital Reports*, vol. i. p. 621, for a case, by Dr. Bright, of jaundice independent of malignant disease accompanied by most profuse hæmorrhage from all the mucous membranes.