

VI. *An Account of a Method of performing the Operation of Lithotomy at two different Times.* By Petrus Camper, M. D. F. R. S. Honorary Professor of Physic, Anatomy, and Surgery at Amsterdam, Fellow of the Royal College of Physicians and of the Royal Society of Edinburgh, of the Imperial Academy at St. Petersburg, and of the Royal Academy of Sciences and Royal Medical Society at Paris, &c. Translated\* from the Dutch,

**I** SHALL begin this account of an improved method of performing the operation of lithotomy, which the celebrated M. Louis has for some time adopted with great success, by mentioning the information I was favoured with lately, when at Paris, by M. Louis himself on this subject.

\* Just as this article (which is extracted from the *Nieuwe Vaderlandsche Letteroeffeningen*, a periodical work published at Amsterdam) was going to the press, we received, with infinite regret, an account of the death of the learned and benevolent Author, at the Hague, (where he was a Member of the Council of State) in his 67th year, April 7th, 1789.—

EDITOR.

His

His usual method, as he observed to me, of cutting for the stone, is by the lateral operation as improved by Hawkins, and which is too well known to render any account of it necessary on the present occasion. M. Louis is of opinion that, in this operation, it is not the incision into the bladder which occasions the greatest difficulty in the cure, but rather the immediate removal of the stone as soon as the incision is made; and this for these obvious reasons, that the bladder must necessarily be in a painful and irritable state from the introduction of the staff, and liable to be injured by the exertions that may be requisite to extract the stone immediately. In cases of this sort, he observes, the bladder, until the incision is made, suffers violent pain from the difficulty with which the urine is voided, and likewise from the introduction of the staff and other instruments requisite in the operation; and the consequence of this is a constant and powerful contraction of the irritated part, so that one can only, as it were, by force get into the bladder to take hold of and extract the stone. Indeed I myself can affirm that both during the extraction of the stone, and afterwards, I have frequently seen very alarming symptoms take place, although

though the operation was performed by very able and experienced surgeons.

M. Louis assured me, that since he had omitted to extract the stone immediately after the incision he had not lost a single patient by lithotomy, an operation which is in general, with good reason, considered as a very dangerous one\*. On the day appointed for the operation, his practice for some time past has been to proceed no farther in it than the making the incision into the bladder †. As soon as this part of the ope-

\* It has been well observed by one of the latest and most judicious Writers on Surgery, that the hazard attending the operation of lithotomy may be considered as corresponding with the size of the stone to be extracted. In healthy subjects, when the stone is small, and the operation is properly performed, he is inclined to think that not above one dies in twenty. But although a few instances have occurred of patients recovering from whom stones have been extracted of a large size, yet, whenever the stone exceeds seven or eight ounces in weight, he is of opinion that not above one in ten recovers.— See Mr. Bell's System of Surgery, Vol. II. page 114.—EDITOR.

† Although M. Louis has adopted Hawkins's method, yet he thinks the other modes of performing the lateral operation, as practised by Rau, Cheselden, and Le Dran, may be quite as advantageous as that is when the operator is accustomed to them.

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ration is accomplished, the patient, who, by means of the opening made into the bladder, has a free and easy outlet for his urine, is put to bed, and the next day M. Louis examines the wound carefully, and endeavours to ascertain what nature has done, or is actually doing, to rid herself of the stone. He sometimes waits till the third, fourth, or even fifth day after the incision before he attempts to extract the stone by means of an instrument, and the removal of it then, he observes, is so easy to the operator, and so little painful to the patient, as would *a priori* be deemed almost incredible.

In case there are several calculi, he proceeds in the same cautious manner, and waits for a favourable opportunity to extract them.

The great advantages of this method struck me very forcibly, and seemed easy of explanation from analogy with those cases in which we see other extraneous bodies, such as glass, bullets, portions of fractured bone, &c., make their way gradually outwards by suppuration, and as it were almost insensibly, by the powers of nature alone; and I can easily conceive that the stone, as an extraneous substance, will, after the incision into the bladder, procure itself an exit in the same manner. Indeed I am able to  
recollect

recollect instances where, after the lateral operation, stones left behind in the bladder have been discharged through the wound almost without the knowledge of the patient : I had, therefore, no doubt of the good effects of this mode of treatment.

This improvement is not so new as might perhaps be imagined ; for M. Louis has traced it to the time of Peter Franco, who, more than two centuries ago, recommended the same method of operating.

I had no time while at Paris to look into Franco's work ; but since my return I have perused a copy of this scarce book, for which I am indebted to Professor Roell. I call it a scarce book, because there is no copy of it in the libraries belonging to the Universities of Leyden, Franeker, or Groningen. It is not in the collection published by Uffenbach \* ; and even Haller, who seems to have been acquainted with the general merit of Franco as a surgical writer, has paid but little attention † to the particular passages here alluded to.

My

\* Thesaurus Chirurgicus. Folio. Francof. 1590.

† *Esse ubi præstet lapillum post vesicam incisam sibi relinquere, qui facilius sub tempore suppurationis elabatur*, is all that

My copy of Franco's book \* is dated Lyons, 1561; but, according to Haller, a former edition of it had appeared some years before, viz. in 1556, under another title.

In this work he treats very fully of different surgical methods of treatment, and in particular of lithotomy.

In his thirty-second chapter, speaking of the fatigue a patient undergoes when there is more than one stone in the bladder, he makes use of the following expressions: —“Some,” says he, “have kept their patients so long under their hands, that they have died. It would be better, therefore, to do it at two times, as will hereafter be shown, than thus to hasten death.

that Haller says of this method in his account of Franco's book.— See his *Bibl. Chirurg.* Tom. I. p. 211.—EDITOR.

\* A copy of it is in the British Museum. It is entitled “*Traité des Hernies; contenant une ample declaration de toutes leurs especes, et autres excellentes parties de la Chirurgie, assauoir de la Pierre, des Cataractes des yeux et autres maladies, desquelles comme la cure est perilleuse, aussi est elle de peu d'hommes bien exercée: avec leurs causes, signes, accidens, anatomie des parties affectées, et de leur entiere guerison. Par Pierre Franco de Turiers en Provence, demeurant a present a Orenges.*” 8vo. Lyons, 1561.—EDITOR.

“ .... Nevertheless, as the wound is open, the  
 “ urine, for some days, flows out more easily,  
 “ and without so much pain ; though it is true  
 “ that when the stone comes to lay upon the  
 “ wound this cannot be done without pain.  
 “ When, therefore, we find that another stone  
 “ is remaining, we must try to bring it away,  
 “ if the patient is free from fever, and there is  
 “ nothing else to prevent it ; for most frequent-  
 “ ly they present themselves spontaneously at  
 “ the wound, whether there be one or several  
 “ stones. It is then easy to draw them out  
 “ through the wound ; but in case they should  
 “ not come down and present of themselves,  
 “ we must then make use of the method I have  
 “ before described for extracting them \*.”

In another place he says, “ If the stone is  
 “ large or uneven, the strength of the patient  
 “ may

\* “ Aucuns ont tant tenu les patients en leurs mains, qu'ils  
 “ sont demeurez morts. Il vaudroit mieux le faire a deux  
 “ fois, comme sera cy après monsté, que de les precipiter a  
 “ la mort. . . . Toutes fois a cause que la playe est ouverte,  
 “ l'urine passe plus facilement par quelques jours sans tant de  
 “ douleur ; bien est vray que quand la pierre se vient appuyer  
 “ sur l'ulcere, que ce ne se peult faire sans douleur. Ayant  
 “ donc entendu et connu qu'il y peult encores avoir pierre,  
 “ il fault essayer la tirer si le patient est exempt de fievre, et  
 “ autre

“ may be exhausted, or he may even die under  
 “ the hands of the surgeon, and this as much  
 “ from the pain as from the great loss of blood.  
 “ . . . . I find it better, therefore, (as I have  
 “ done several times) to do it at two times \*.”

Franco describes this mode of operating in the following words :—“ First,” says he, “ the  
 “ patient must be made ready, and after-  
 “ wards the incision is to be made in the  
 “ same manner neither more nor less than was  
 “ directed in the preceding chapter: this be-  
 “ ing done, a tent, if you will, may be intro-  
 “ duced, there being no occasion at this time  
 “ to make any attempt to get away the stone,  
 “ unless it should chance to present itself at the  
 “ wound ; but, after making the incision, dres-

“ autre chose n’empêche, car le plus souvent elles se viennent  
 “ rendre d’elles mêmes à la playe, soit qu’il en y ait une ou  
 “ plus. Alors est facile les tirer hors par la playe même.  
 “ Et si d’elles mêmes ne descendoient bas, et que ne se pre-  
 “ sentassent, il faut user des moyens que avons dit cy devant  
 “ pour les y amener.”—Franco, *Traité des Hernies*, p. 128.

\* “ Si la pierre est grosse ou roigneuse, la force du patient  
 “ peut estre profermée, ou bien demeurer entre les mains du  
 “ maître, tant a raison de la douleur, que de la grande fluxion  
 “ du sang . . . . Le trouve donc meilleur (comme j’ay fait plu-  
 “ sieurs fois) de le faire en deux fois.”—*Ibid.* p. 123.

“fings must be applied to the wound, with ban-  
 “dages, as before mentioned. After some  
 “days, when the patient appears to be in a  
 “good state, and without fever, (which is not  
 “to be expected unless he keeps to a good  
 “regimen) if the stone presents itself at the  
 “wound, which it most frequently does, as I  
 “have several times experienced, it must then  
 “be extracted in the manner already described.  
 “But if it should happen not to present itself,  
 “it must be brought down by introducing the  
 “finger into the rectum, and compressing the  
 “lower part of the belly \*.”

\* “Premièrement il faut que le patient soit préparé, et  
 “apres faire l’incision en la mesme facon ne plus ne moins  
 “qu’avons dit au chapitre precedent: et l’ayant faite on  
 “pourra mettre une tente si l’on veult; n’estant besoin de rien  
 “tenter apres la pierre pour ceste fois, si d’aventure ne se pre-  
 “entoit d’elle mesme à la playe: apres avoir faite l’incision,  
 “faut mettre les appareils dessus la playe avec bendages,  
 “comme dessus. Apres quelques jours quand on connoistre  
 “le patient estre en bonne disposition et sans fièvre (laquelle  
 “ne luy adviendra moyennant qu’il tienne bon regime) si la  
 “pierre se presentoit a la playe, comme le plus souvent fait,  
 “ainsi qu’ay par plusieurs fois experimenté, faudra la tirer  
 “suyvant la maniere exposée. Mais ne se presentant point il  
 “a faut faire descendre en mettant les doigts au fondement,  
 “et en comprimant le petit ventre.”—Ibid. p. 134.

He speaks of this as a method peculiar to himself, and not described by any former writer. — “Some,” he observes, “may think it strange to leave a patient in this manner, undisturbed, the space of five or six days, more or less, after making the incision. It is certain, however, that persons of good judgment, when they have heard the reasons, have been satisfied \*.”

He farther confirms the utility of this mode of treatment by the following remarks: — “It has sometimes happened,” says he, “that, after having extracted a stone, the patient has been so weak I have not dared to undertake any farther examination to know whether any other remained, fearing lest he should die under my hands. But having put the dressings on the wound, and bound up the patient in the manner already described, I have left him till he was become stronger, and very often have found, in changing the first dressings, or afterwards, that the stone which

“Aucuns le trouvent estrange de laisser son patient ainsi en repos l'espace de cinq ou six jours plus ou moins apres avoir fait l'incision. Bien est vray que gens de bon jugement, quand ils ont entendu les raisons ont esté satisfaits.”  
—Ibid. p. 138.

“ had remained was come entirely away of it-  
 “ self.... Observing these things, and having  
 “ several times experienced them, I have fal-  
 “ len on the method contained in this chapter ;  
 “ that is to say, that, after the incision is made,  
 “ the stone is not to be immediately extracted  
 “ unless it presents of itself\*.”

The foregoing passages will be sufficient to show the accurate and judicious manner in which Franco has treated this subject, and how well he deserves to be quoted as an authority for this mode of treatment by my experienced friend, M. Louis. The latter, however, deviates a little from Franco's method, by leaving a free passage for the urine instead of filling up

\* “ Mestant quelque fois advenu, que apres avoir tiré une  
 “ pierre le patient estoit tant debile, que je n'ausoye entre-  
 “ prendre de le plus presser, pour savoir s'il y en demeuroit  
 “ point d'autre, creignant qu'il ne mourust entre mes mains.  
 “ Or ayant mis les appareils sur la playe, et bendé comme  
 “ avons dit dessus, je le laissoye jusques a ce qu'il fust plus  
 “ fort, et bien souvent ay trouvé que en changeant le premier  
 “ appareil, ou apprest, que la pierre qui estoit demeurée es-  
 “ toit sortie du tout dehors d'elle mesme.... Voyant ces  
 “ choses, et les ayant par plusieurs fois pratiquées, j'ay col-  
 “ ligé cette methode, contenue en ce chapitre : assavoir qu'a-  
 “ pres l'incision faite de ne tirer la pierre tout a la fois si  
 “ d'elle mesme ne s'y presentoit.”—Ibid. p. 138 & 139.

the wound, and this he does, with a view to prevent unnecessary pain to the patient.

It will perhaps be a still greater recommendation of this method when I add, that it is highly extolled by Fabricius Hildanus in his excellent book \* on lithotomy. Manget also, in his *Bibliotheca Chirurgica* †, approves of this method.

\* In his 16th chapter, entitled “ De quarto operandi modo, in Lithotomia usitato, qui meritó *Lithotomia Francina* appellari potest,” in which, after treating fully of the method of operating described in the present paper, he adds his own testimony in its favour in the following words:—  
 “ Quam probus ac prudens Lithotomus Francus iste fuerit, apparet. Idem quoque familiares ipsius de ipso testati sunt, quorum adhuc aliqui, cum anno 1586 Laufannam \* venissem, in vivis superstites fuerant. Utinam operandi modus iste apud omnes lithotomos et castratores introduci posset; longé enim plures incisos evasuros existimo. Quoniam enim lithotomus ita apud se statuit, necesse esse, ut æger prima vice vel a calculo liberetur, aut moriatur, hinc sæpe fit, ut in incisione tantam profundat sanguinis copiam, vel adeo torqueatur, ut propter dolorem immanem, inflammationem, aliaque perniciofa symptomata mox subsequantia, vel in ipsa incisione vel statim post moriatur. Quæ omnia impediri possent, si præscriptum operandi modum imitarentur.” —EDITOR.

† Tom. I. p. 274.

\* Franco resided many years at Lausanne.

I must

I must not omit to mention that Colot sometimes performed the operation of cutting for the stone at two different times. In his work \* on lithotomy he observes † that this method made much noise at Court, and that the King had expressed himself pleased with the invention. Colot makes no mention of Franco in this part of his book, and indeed he advises this method only in cases of great debility; for in general he directs ‡ the stone to be extracted immediately after the incision, lest the surgeon should find himself obliged to perform this part

\* *Traité de l'Operation de la Taille; avec des observations sur la formation de la pierre et les suppressions d'Urine. Ouvrage posthume de M. Fr. Colot; auquel on a joint un discours sur la methode de Franco et sur celle de M. Rau. 8vo, Paris, 1727.*

† “ Ce fut la cure de M. l'Abbé de Chauvelin qui me donna lieu de faire l'operation de la pierre en deux tems; cela fit beaucoup de bruit, particulierement a la cour, où sa Majesté loua cette decouverte.”—Colot, p. 182.

‡ “ Pour ceux qui sont dans les grands accès de leurs douleurs, il faut enlever la pierre des qu'on a fait l'ouverture; autrement on risque de se voir obligé de tirer la pierre dans le tems ou la nature travaille a faire la suppuration de la playe, ce qui l'empêcheroit de poursuivre son chemin . . . Il est donc tres rare de pouvoir obtenir ce que l'on se propose de cette methode.”—Ibid. p. 183.

of the operation when the wound has begun to uppurate : and he adds, that the advantages the surgeon may propose to himself from this method will be very seldom obtained.

In cases where the patient's strength is extremely reduced, Heister \* advises Colot's method to be adopted ; as he does likewise when there are several calculi in the bladder : and we are told by Saviard, that, in the case of a child who had two calculi, finding the patient greatly fatigued after the removal of the first, he suffered eight days to elapse before he proceeded to the extraction of the remaining calculus, and the patient, he adds, was perfectly cured †. These authorities all tend to confirm the practi-

\* System of Surgery, Part II. sect. v. chap. 141.

† “ Je poussay ensuite pour la seconde fois mon bouton dans la vessie, où je sentis une seconde pierre, que je ne jugeay pas à propos de tirer ce jour là parceque l'enfant étoit trop fatigué. Je le fis panser avec les astringens, les embrocations, et tous les remèdes dont on se sert au premier appareil ; on luy fit le lendemain une petite saignée, et l'on continua pendant huit jours à le panser, avant que je songeasse à lui tirer cette seconde pierre, que je chargeay et tiray ensuite comme la première. . . . Le pansement fut continué, avec beaucoup d'exactitude, jusqu'à sa parfaite guérison.” — *Vide Nouveau Recueil d'Observations Chirurgicales*. 2vo. Paris, 1702, p. 206.

cability and good effects, in certain cases, of Franco's method.

The great object of M. Louis, that of lessening, by means of the incision, the violent pain the patients experience, may be supported by the authority of several eminent writers on surgery, although they have in general recommended it only when the stone is too large to be extracted. Thus Baron Van Swieten, in his Commentary on the 1427th aphorism of Boerhaave, speaking of the occurrence of a stone in the bladder too large to be extracted, observes, that in such cases nothing more remains to be done than to make an artificial opening in the perinæum, through which the urine may be evacuated. By this means, he adds, "the evil  
" may be palliated, though not removed, and  
" life will be rendered more tolerable \*." The learned Commentator adds, that this method has been tried with a good effect by Douglas, on the authority of *Collet*, a famous French lithotomist. I have no doubt but that for *Collet* we should read *Colot*, as the observation mentioned by Van Swieten, apparently on the au-

\* "Leniuntur sic mala, licet non tollantur, redditurque  
"vita tolerabilior."

thority of Douglas, is to be found in Colot's work \* already referred to.

It appears, however, from a passage in Avicenna, that an opening into the urethra, for the sake of letting off the urine in cases of pain from the stone, was in use many centuries ago. The passage in question, as I find it in a Latin version † of Avicenna, may be thus rendered :  
 “ When there is difficulty in discharging the  
 “ urine, occasioned by a stone in the bladder,  
 “ and there is no possibility of extracting the  
 “ stone by cutting, on account of some parti-  
 “ cular circumstance that prevents it, or the  
 “ fears of the patient; in such cases a small  
 “ opening must be made in that part which is  
 “ between the anus and testicles, and into this  
 “ opening a canula introduced, that so death  
 “ may be prevented, although life will thereby  
 “ not be rendered thoroughly easy.”

\* Page 188.

† Tract. I. cap. vi.