THE

EFFICACY AND INNOCENCY

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OF

SOLVENTS,

CANDIDLY EXAMINED.

(PRICE ONE SHILLING AND SIX-PENCE.)

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THE EFFICACY AND INNOCENCY OF SOLVENTS CANDIDLY EXAMINED; WITH EXPERIMENTS AND CASES.

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—c

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THE EFFICACY AND INNOCENCY OF SOLVENTS, CANDIDLY EXAMINED.

CHAPTER I.

THE AUTHOR'S CASE OF THE STONE AND GRAVEL, INTERSPERSED WITH SOME EXPERIMENTS INTENDED TO ASCERTAIN THE SOLVENT POWER OF SOAP-LYE AND QUICK LIME.

I INHERITED the gravel and ſtone from my father, who was afflicted with nephritick complaints in the latter part of his life, and found conſiderable

benefit from the uſe of honey. He died of another diſorder in his ſixty-firſt year.

My firſt attack was in 1768, when recollecting the relief my father received from honey, I immediately had recourſe to it.

I used alſo ſoap, and lime water, (which were then in vogue) by the advice of a phyſician, a friend of mine.

It was the late Sir John Pringle who finally determined me to perſevere in a courſe of honey, and not to take leſs, in one ſhape or another, than a pound per week.

It certainly was of conſiderable ſervice to me;—for many years my fits were mode-

moderate, and not frequent; ſometimes not above one of any conſequence in a year, after which I generally paſſed a red ſtone about the ſize of a ſmall pea, and ſometimes a few others much ſmaller.

In the ſummer of 1780, I had a nephritick fit, which was not more violent than uſual; but what gave me uneaſineſs was, that after the ſtone had deſcended into the bladder, I never obſerved that I paſſed it; though it was of much conſequence to watch its iſſue.

In a few months after, my irritations to urine became more frequent, and by degrees more painful, eſpecially on exerciſe; and bloody urine frequently attended them. They became at laſt ſo very inſupportable, as to convince

me I had a ſtone in my bladder; and brought me to a determination (which I had been long averſe from, on account of the ſtrict regimen injoined) to begin a courſe of lixivium.

MAY 13th, 1781, I began the uſe of lixivium, making choice of that invented and recommended by Dr. Jurin*; of which I took two tea ſpoonfuls twice a day, in half a pint of veal broth, at ten at night and ſeven in the morning. My irritations were much increaſed a few days after I began it, upon taking ſome walking exerciſe; but they ſoon went off, and in a fortnight became very ſupportable.

* SOLD by Mr. Langley, Apothecary in Old Broad Street.

I CON-

I CONTINUED the uſe of Jurin's lixivium till the middle of July, when I changed it for Blackrie's* †; in this I perſevered 'till September 18th, excepting twice that I intermitted it for a few days, upon ſlight feveriſh complaints. One tea ſpoonful of this laſt lixivium twice a day was what was directed to be taken, and I found it full as pungent as two of the former. I now thought it proper to take a ſhort reſpite.

AFTER taking the lixivium about nine weeks, it occurred to me, that if my urine, ſaturated by the lixivium, had a conſiderable effect in diſſolving a

* MY reaſon for this will be given in the experiments on the comparative ſtrength of ſome of the lixivia now in common uſe.

† SOLD at Slater and Co's. Chymiſts in the Poultry.

ſtone formed in the urinary paſſages, when out of the bladder, it would be an undeniable proof, that it muſt have the ſame effect in the kidneys and bladder.

EXPERIMENT I.

I PUT a red ſtone which I had formerly paſſed, (weighing exactly two grains) July 1ſt, into a gallipot which held thirteen ounces; this I filled with my urine warm from the bladder betwixt the hours of eight and nine in the morning, when I had taken nothing from tea time the evening before, excepting my broth, ſaturated with the lixivium as before mentioned.

THE gallipot was ſet in a cloſet with a weſt aſpect, and the urine changed every morning.

SEPTEMBER 18th, when I left off taking the lixivium, I weighed the ſtone, and found it reduced to barely a quarter of a grain.

EXPERIMENT II.

AUGUST 4th, I put into the gallipot two other ſtones I had paſſed. One of a longiſh ſhape, weighing two grains and a quarter, the other round, weighing one grain and three quarters.

SEPTEMBER 18th, the long one weighed exactly one grain; and the round one three quarters of a grain.

ABOUT the middle of October, my irritations returned, and gradually increaſed; which made me again have recourſe to the lixivium on the 1ſt of November.

I TOOK Blackrie's, and was ſoon relieved. It was continued until Chriſtmas-day, when I again intermitted the uſe of it, 'till January 15th, 1782, when my irritations returned.

THE late Sir John Pringle having a partiality for that lixivium made and ſold by Mr. Lane*, I procured a half

* APOTHECARY in Alderſgate Street.

pint

pint bottle of it, and took two tea ſpoonfuls thereof at the uſual hours, twice a day, which had the ſame effect as the others.

THOUGH my experiments laſt ſummer, evidently proved the urine ſaturated by the lixivium to have a ſolvent power; yet as the ſmall ſtones I myſelf had paſſed, were probably much ſofter than thoſe grown ſo large in the bladder, as to bear being extracted by the operation of litholomy*; to purſue my experiments on harder ſtones, I therefore procured ſome of that character from Mr. Hunter.

* THE firſt hint of this was given me by Dr. Donald Monro.

EXPERI-

EXPERIMENT III.

MARCH 2d, I put into the ſame gallipot formely uſed, a fragment of calculus, of a pear-like ſhape, and which ſeemed to have been a nucleus, weighing fifteen grains and three quarters. Another of a brown colour, ſeemingly hard, and to have been a lamina ſeparated; weighing ſeven grains and three quarters. And an irregular ſhaped one weighing five grains and three quarters. The lixivium I took was Blackrie's. As the weather was very cold for the ſeaſon, I ſet the gallipot by the kitchen fire, but at a foot and a half diſtant from it.

MARCH 22d, on being weighed, each of them had loſt three quarters of a grain.

HITHERTO

HITHERTO I had been very careful to comply with Dr. Chittick's regimen as publiſhed by Blackrie, though extremely diſagreeable; but at this time (March 22d) falling into company with ſome chymiſts, and talking of the entire abſtinence from ſalt injoined by that regimen; they were of opinion, that though a ſtrong acid was extracted from ſea ſalt by a chymical operation, yet it was ſo concentrated in the ſalt, that the juices in the ſtomach and inteſtines could not poſſibly decompoſe it. This brought me to a reſolution to eat ſalt, fat, greens, and every thing that was not directly acid, during the next experiment, that I might obſerve whether by ſo doing, the ſolvent power was weakened or deſtroyed.

EXPE-

EXPERIMENT IV.

I WENT on with the experiment on the three laſt mentioned ſtones. Blackrie's lixivium was taken, but (as I had now perſevered for a conſiderable time) not in ſuch large doſes as before; taking in eight weeks, what I uſed to take in ſix.

MAY 8th, I weighed the ſtones, having taken them out of the gallipot a week before, and they were now as dry as when put in.

THE large pyriform one weighed thirteen grains and a quarter. The brown coloured lamina five grains and three quarters. And the ſmall irregular

gular ſhaped one four grains and a half.

Mr. Hunter propoſed by way of contraſt, that I ſhould try the effects of urine unſaturated with the lixivium upon pieces of the ſame ſtones, expecting that their weight would increaſe. Accordingly,

(EXPERIMENT V.)

March 7th, I put a bit of the brown coloured ſtone, weighing two grains, and another bit, on which ſome other experiments had been made, weighing one grain and a half, into a gallipot; making a healthy perſon fill it with his urine, and change that once a day

as

as I did mine, and to keep it exactly in the ſame heat with the other gallipot.

March 27th, I found they had acquired a red brick duſt colour like the furring of a chamber-pot, and had each increaſed half a grain in weight. I directed him to continue this experiment with care, but about the middle of April the ſtones were thrown into the duſt-hole by miſtake.

June 17th, my irritations returning in a moderate degree, I had again recourſe to the lixivium, and having purchaſed a ſmall bottle of Adams's*, (reſolving to try all of thoſe which were in vogue) I took three tea ſpoonfuls in ſome broth at ten at night.

* Sold by Mr. Perry, Argyle Street.

THE flavour of the different herbs made uſe of to diſguiſe it, proved diſagreeable to my palate, and gave me ſuch an uneaſineſs, ſickneſs, and nauſea in my ſtomach, that I was obliged to take a gentle purge next morning to carry it downwards, by which I was relieved.

I WILL not affirm that my cholick was occaſioned by the ſolvent.

I TOOK two tea ſpoonfuls again on the 18th at night, and the ſame next morning; and all that day had a confuſion in my head, and little appetite: moſt probably occaſioned by the opiate which it appears to contain. Some affirm it to be of the mildeſt kind, and only ſyrupe of diacodium. However that may be, it had ſo diſagreeable an

effect

effect on me (beſides my being generally coſtive when taking the lixivium, which that would have encreaſed) that I determined to take no more of it, but to return to Blackrie's.

EXPERIMENT VI.

From June 21ſt to Auguſt the 7th, I repeated the third experiment with the ſame ſtones, which weighed exactly now as on May 8th: During which time I had taken a half pint bottle of Blackrie's lixivium, and kept very cloſe to Chittick's regimen; ſeldom or never taking liberties with it.

On

On the above named 7th of Auguſt, I took the ſtones out of the gallipot of urine, and gently wiping the large pyriform one with a ſoft cloth, upon a very ſlight preſſure, it broke to pieces betwixt my fingers, and crumbled into ſmall bits; excepting an interior nucleus of ſmall dimenſions which had ſome degree of greater firmneſs.

The two other ſtones which had been always with it in the gallipot, ſeemed alſo to have a ſmall degree of more coheſion, ſo that I put them up in a paper together.

When the fragments were dry, thoſe of the nucleus weighed twelve grains, and the other two (for they could not now be ſeparately weighed from having

crumbled more than I expected) ſeven grains.

On the whole, in fifteen weeks, the two ſmall ſtones had loſt nearly half of their weight; and though the large nucleus loſt only about a fourth, what is of great conſideration, the texture of it was ſo looſened (by the ſeparation of the connecting mucus from the ſabulous particles) that its parts were reduced to fragments, ſmall enough to have paſſed the urethra.

Nor, as has been already mentioned, were the other two in a very diſſimilar condition.

On the ſame 21ſt of June, I repeated the experiment with the perſon's urine mentioned before.

EXPE-

EXPERIMENT VII.

I PUT two fragments of hard ſtone into his gallipot, one weighing three grains and a half, and the other two grains and a half. His gallipot ſtood in the ſame heat with mine, and both were treated alike, as to emptying them once a day, and waſhing them out once a week with water; but the fur on both was allowed to remain on.

THE ſtones did not acquire the brick-duſt colour as in Experiment V. nor had they increaſed in weight the 7th of Auguſt quite half a grain each; ſo that now in ſeven weeks they had not gained ſo much as before in three.

I SHALL not infer from thence, that the brick-duſt coloured fur is the matter moſt productive of theſe concretions; for experience ſhews, that large ſtones formed in the bladder are ſeldom of that colour: (though ſmall ones paſſed in the gravel commonly are; and the nucleuſſes of large ones moſt frequently * :) but it certainly evinces that the ſame perſon's urine, in a very ſhort ſpace of time, is liable to great variations, with reſpect to the colour and quantity of that fur.

As to the queſtion, whether ſo ſtrict a regimen as Chittick's is of that conſe-

* 1420, Manente ſemper nucleo rubro, reliqui orbes, rubri, albi, cinerei, caerulei, perque gradus colorum notatur gradus inſolubilitatus, ipſa chemia detagendas.

HERMAN. BOERHAAVE APHORISMI.

poſes

quence he ſuppoſes towards the ſolvent power of the medicine? I think my laſt experiments plainly prove that it is not. For in thirty-nine days in which I eat ſalt, butter, greens, &c. the three ſtones loſt three grains and a half, and in forty-nine days of ſtrict regimen they loſt only four grains and a half. In the former period likewiſe, the doſes of lixivium were ſomewhat ſmaller.

When under the courſe of lixivium, I generally enjoyed my health perfectly well; and my appetite was more keen than uſual. At firſt the ſtrict diet, and particularly, abſtaining from ſalt was diſtreſſing; but cuſtom made it eaſy; and I ſupplied its place with onions, horſe-radiſh, and muſtard, which compoſed my ſauce to all kinds of fleſh meat.

COSTIVENESS was removed occaſionally by ſwallowing with the lixivium in my broth at night, a table ſpoonful of white muſtard ſeed whole; that opener was prefered, as it is alſo a good nervous medicine, having had a ſlight numbneſs in one of my hands before I began the lixivium.

THE taking the lixivium in milk was recommended to me, as taking off in a great degree the nauſeous taſte, but on trial it did not agree with my ſtomach and bowels.

AT firſt upon any ſlight feveriſhneſs from cold, or otherwiſe, I left it off, but found that afterwards unneceſſary.

AN oleaginous film on the gallipot, as well as a calcareous ſediment, was conſtantly

ſtantly to be ſeen and even felt, as Dr. Jurin obſerves in his caſe.

My chamber-pot was ſcarcely furred at all in one night, but my gallipot in the courſe of ſeven weeks (from June 21ſt to Auguſt 7th) was ſlightly ſo; for I did not allow the ſervant to ſcour it during that time. When both that and the other perſon's (which had been uſed exactly the ſame time) were thoroughly dry, I carefully ſcraped off the cruſts and weighed them: that from my gallipot, which held thirteen ounces, weighed ſixteen grains: and that from the other perſon's, which held only nine ounces, weighed thirty-two grains; though this was at a time when his urine ſeemed but little impregnated with ſabulous matter.

His was alſo of a much darker colour.

During the whole time of my taking the lixivium, and the intervals, from May the 13th, 1781, I never had a fit of the gravel, or paſſed a ſtone, 'till Auguſt the 18th, 1782, eleven days after I left off taking it at that time; when without any nephritick pain, I paſſed very eaſily a ſmall one, weighing one grain; although it ſeemed from its corners likely to give pain. It was of an irregular ſquare form, one ſide a ſmooth convex, and ſeemed part of a lamina: its texture was firm, and no way honeycombed: And December 27th, I paſſed a larger piece of a ſimilar lamina with equal eaſe; it was of a roundiſh flat figure, and weighed three grains. But of this, the texture was much leſs firm

than

than that of the former; for next day it broke in two in a gentleman's hands, without any force being uſed.

FROM the above experiments (which have been carefully made, and candidly related) it would ſeem I am authoriſed to conclude, that there is undoubtedly a ſolvent power in the urine of a perſon who is under a courſe of lixivium.

CHAPTER

CHAPTER II.

SOME OBSERVATIONS ON MR. N——N'S SHORT ENQUIRY INTO THE MERIT OF SOLVENTS.

I DID not read this pamphlet (tho' it was known to me) till after I had finiſhed the account of my experiments; reſolving to run no riſk of being biaſſed by any authority, however reſpectable; but to depend entirely on the reſult of my experiments, and other facts deduced from experience.

On the perusal of it, I found he differed so widely from me in his opinion of solvents, exploding them in all cases whatsoever, without substituting any thing in their room, where the operation of lithotomy cannot take place; that I believed myself under a necessity of making some observations on his performance; to prevent patients in this cruel distemper from being deprived of the relief which solvents afford.

It is true, his title only says, so far as may be necessary to compare them with the operation of lithotomy; but if his character of them is to guide men's judgments, they will be entirely banished from practice.

It is, "that if given in small doses, and with caution, they leave the patient pre-

preciſely in the ſame ſtate they found him; if the quantity is increaſed, they produce feveriſh heats, and an uneaſineſs in the ſyſtem, diſorder in the primæ viæ, appetite, and digeſtion, increaſe the ſecretion of urine, and render it perhaps more turbid than it is naturally; and if medicines of this kind are given in large quantities, and are perſevered in, they ultimately tend to deſtroy the patient; nor can indeed preparations of this kind be given, even in ſmall doſes, in ſome conſtitutions, without hazarding the life of the patient, and the credit of the preſcriber.*"

THIS formidable liſt of diſorders brought on by ſolvents, is ſufficient to deter the patient moſt anxious for relief,

* NEWMAN on Solvents, page 24.

from

from uſing them; but I faithfully declare, that I felt none of theſe bad effects myſelf, nor have heard from others under a courſe of ſolvents, any complaints of that kind; which makes me ſuſpect, that ſome one caſe, (perhaps a perſon of a delicate conſtitution) has been exaggerated into the general condition of patients under that courſe.

Above all, the death of the celebrated Mr. Garrick is particularly inſiſted on, as having undoubtedly been occaſioned by the uſe of ſolvents; in teſtimony of which, the following ſtate of the parts on opening his body, is given. "The organiſation and ſubſtance of the kidneys were found almoſt deſtroyed; a ſtone of conſiderable ſize was found in the bladder; the ſurface of which plainly evinced, that it had not been in any

degree

degree abraded, diſſolved, or broken down; though it might have been expected from the vaſt quantity of drugs he ſwallowed, his long perſeverance, and boaſted efficacy of them*."

I WISH with Mr. N——n, that he could have been prevailed on to undergo the operation of lithotomy; but I cannot be of opinion that it would have ſecured him from the diſeaſe in his kidneys; even if he had never taſted ſolvents.

A MUCH eſteemed friend of mine, the late Mr. John Home, Commiſſioner of the Sick and Hurt, had been long troubled with the gravel; and never had taken any thing as a medicine excepting honey. He died after a ſhort illneſs, which was ſaid to be the gout in his

* NEWMAN on Solvents, page 26.

ſtomach;

ſtomach; though the late Sir John Pringle was far from thinking that the diſeaſe in his kidneys was guiltleſs of it: and in this I imagine few people will differ from him. His body was opened by a celebrated anatomiſt; when both his kidneys were found much enlarged; the internal ſtructure of them almoſt deſtroyed, and filled up with hydatides, leaving the external cortical ſubſtance extremely thinned.

A SMALL ſtone was alſo found in one of them.

SEE the great Boerhaave's deſcription of this diſeaſe, long before the preſent ſolvents were thought of *.

AND

* 1415. ID ſi in renibus fit a parte terreſtri ſanguinis exſiccata, fit calculus renum, maxime

And what foundation is there (but mere conjecture) for the aſſertions in the following paragraphs?

"I have ſeen two inſtances where the patients in a diſtinct benign ſpecies of the ſmall pox, both died, though the diſeaſe in the neighbourhood was by no means fatal: they were taking ſolvents when the ſymptoms of the ſmall-pox came out; and though it could not be certainly ſaid, that the ſolvents were the cauſe of their death, the natural im-

ime ortus ad ultimas arterias; ſpecie arenae.

1416. Qui ſenſim ibidem accreſcens renem obſtiput, carnem ejus ſuffocat, conſumit, ſpecie grumi, puris, caranculæ, pellium expellit, totumque tandem corrumpit, mictus ſanguineos, purulentos, foetidos excitat; quin ſæpe ulcerationem vicinorum, poſt inflammationem creat.

Herman. Boerhaave Aphorismi.

partial inference would render it more than probable.

" A THIRD patient under a courſe of ſolvents, was ſeized with a putrid fever, and ulcers in the throat, under which he ſunk, though port wine, bark, bliſters, &c. were liberally uſed, and under the direction of a gentleman who is an honour to his profeſſion; this laſt patient was remarkably healthy before he was afflicted with the ſtone.*"

IN the foregoing narratives of putrid caſes, it is evidently taken for granted, that the lixivia are ſtrong ſeptics, or promoters of putrefaction.

BUT Sir John Pringle in his experiments on ſeptics and antiſeptics, after

* NEWMAN on Solvents, page 27.

having

having found in experiment 3d, that the volatile alcaline ſalts were powerful antiſeptics, ſays in experiment 4th,

"I HAVE alſo made ſeveral experiments with the alcaline fixed ſalts, which have no leſs antiſeptic powers than the volatile. The trials were made both with the lye of tartar, and ſalt of wormwood."

As there might however be a different effect from the alcaline ſalt alone, and when joined with quick lime; I made

EXPERIMENT VIII.

OCTOBER 7th, I took four wide mouthed phials, holding four ounces

each ; to every one of which I put two drahms of lean raw beef from the ſame piece, and two ounces of ſoft water.

INTO No. 1. I put no addition.

To No. 2. thirty grains of common table ſalt.

To No. 3. fifty drops of the lye of tartar.

AND to No. 4. fifty drops of Blackrie's lixivium.

THEY were corked, and ſet together on the ſide of a caſt iron bath ſtove, in which a fire was kept all day (about nine or ten inches from it) at ſix o'clock in the evening.

October 8th, at bed-time, No. 2. began to turn putrid, the bit of beef being become ſpecifically lighter than water.

9th. At ſame hour, No. 1. was in a ſimilar condition; and in the morning of the

10th, I threw them both out, as they were become extremely offenſive.

20th. No. 3. and 4. were perfectly ſweet, and ſeemed likely to continue ſo for a conſiderable time longer, but (as it was to be expected from the proportion of lixivium to the water in No. 4. being four times more than ought, or indeed can be taken into the human ſtomach, with ſafety) the bit of beef in

that phial was diſſolved into a perfect mucus.

In other experiments made with Blackrie's ſolvent, fifty drops of it to the ſame quantity of beef and four ounces of water, turned putrid the 8th day.

And twelve drops to two ounces of water, and beef as before, in four days and a half.

This author has alſo made a long courſe of ſolvents, one of the cauſes which hurt lithotomy; and if well founded, would be a conſiderable objection to the making thoſe two methods of cure co-operate one with another. For I have not the ſmalleſt intention of inſinuating that the operation

of

of lithotomy (which is now brought to ſuch perfection) ſhould give place to internal remedies.

It is certainly the moſt expeditious method of cure, and moſt to be depended on. But ſurely the more reſources we have againſt ſo painful and dangerous a diſtemper the better.

Besides in the gravel and ſtones in the kidneys, no operation can take place; and even in ſmall ſtones in the bladder, before the ſymptoms become excruciating, few people can be brought to undergo it; not to mention the difficulty there often is of aſcertaining their exiſtence.

Happily however Mr. N——n has ſaid nothing to ſupport this laſt men-

tioned propoſition, but repetitions of bad effects from them, which I have already (as far as my experience went) denied being the caſe.

His words are, " As to ſolvents, a long courſe of them, from their evident effects, cannot be favourable to the operation of lythotomy, the ſucceſs of which will be proportionably leſſened, as the general health is impaired.

" A LANGOUR and debility, with a diſpoſition to feveriſh complaints, accompanied with loſs of appetite and digeſtion, are in greater or leſs degrees, conſequences, which I have not in the leaſt aggravated.*"

So far are ſolvents however from oc-

* NEWMAN on Solvents, page 27.

caſioning

caſioning a loſs of appetite and digeſtion, with the conſequences generally following thereon, languor and debility; that in diſorders in the primæ viæ from acidities, they are an excellent remedy; and are accordingly preſcribed by ſome eminent practitioners.

And with reſpect to feveriſh heats, I have already ſaid in my own caſe, that I was obliged to intermit taking the ſolvent for a few days at two ſeveral times, on account of ſlight feveriſh complaints, within two or three months after I began my courſe; but whether theſe diſorders were occaſioned by the ſolvent, or from ſome other accidental cauſe, it was not in my power to judge. All the reſt of the time, my appetite, digeſtion, and health in general were perfectly good, though in an advanced age.

CHAPTER III.

A FEW WELL ATTESTED CASES, OF THE BENEFICIAL EFFECTS OF SOLVENTS, PERFECTLY FREE FROM ANY BAD CONSEQUENCES.

BUT as experience is our ſureſt guide, I ſhall give ſome caſes, ſo well atteſted, that they may be eaſily enquired into. The two firſt are communicated by my worthy friend Doctor Robert Knox, late Inſpector General of the hoſpitals in Canada, and Phyſician to the Middleſex Hoſpital.

THE

THE firſt of which, relates to the queſtion laſt treated of; whether a long courſe of ſolvents is hurtful to the operation of lithotomy. And alſo confirms in practice, what Sir John Pringle's experiments made morally certain before, that alcaline ſalts, and even ſolvents, are far from being promoters of putrefaction. The ſecond caſe is on ſtones in the kidneys, where no operation can take place.

CASE I.

"MR. B——s had been afflicted with the ſtone in his bladder from his infancy; at the age of twenty-one or twenty-two, he put himſelf under the care of Dr. Chittick, whoſe lithonthriptick medicine he took with unremitting attention,

tention, and in full dose for sixty-three weeks. In the winter he was attacked with a severe inflammatory cold, for which I recommended bleeding, and found his blood highly inflamed, with a buffy coat upon it, and strong cohæsion of the crassamentum. This complaint lasted ten days, during which he omitted the medicine which he had taken fifty weeks.

From his beginning the medicine, he could walk without making bloody water, and never had a severe fit of the stone during his continuance of it.

On consultation with Sir John Pringle and Mr. Middleton, we agreed that as he had given a fair trial to the effect of that medicine, his only resource was submitting to the operation.

Five

FIVE or ſix weeks after leaving off the medicine, he was accordingly cut, and two ſtones extracted by Sir Cæſar Hawkins aſſiſted by Mr. ——. One ſtone weighed above an ounce, and the other above ſix drahms.

THE only thing remarkable was the appearance of the ſtones. Both of them had got a ſmooth ſurface from the uſe of the lixivium; only on parts of them there ſeemed a freſh accretion of ſandy particles; which could be eaſily rubbed off. His recovery was perfectly favourable, without any accident."

CASE II.

"Mr. G. Arbuthnot, of the Exchequer by the advice of an eminent phyſician

ſician and myſelf, had taken Lane's and Blackrie's lixivium, for ſtones in the kidneys. Before he took the ſolvents he made great quantities of bloody water, but afterwards very ſeldom; upon motion in his carriage however it was ſometimes ſtill coffee coloured. He paſſed many ſtones during that courſe, and one which ſtuck in the urethra, at the narrowing of the ſkin before it paſſed the glans penis. Sir Cæſar Hawkins extracted it, and we found the ſtone very white, with a ſort of clayey appearance on its ſurface, which you could ſcrape off with your nail, and which I am perſuaded was occaſioned by the lixivium."

Doctor Knox's Letter accompanying theſe Caſes.

I HAVE ſent you the two caſes I talked to you about; and could ſend

you

you many others of the good effects of the lixivia in giving eaſe and comfort to patients afflicted with this cruel diſtemper; and thongh I am not ſanguine enough to ſuppoſe that any medicine yet diſcovered can diſſolve a large ſtone in the bladder, yet I am perſuaded the lixivium will prove effectual, where the concretions are not much too large to paſs the ureters or urethra. Add to this, the ineſtimable benefit, in giving eaſe, in one of the moſt painful complaints that mankind is afflicted with. And more eſpecially as I have never ſeen any of the putrid ſymptoms, or diſſolved ſtate of the blood occaſioned by it, ſo much dreaded by Theoriſts.

As I was very intimate with the late Mr. Blackrie, and promoted his firſt publication on this ſubject; I have

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therefore chiefly uſed his lixivium; which is made with ſalt of tartar in place of pot aſhes.

P. S. Mr. G. Arbuthnot was a very fat man, weighing twenty-five ſtone, when in health. He died apoplectic at Richmond, but had no gravel complaints for ſeveral years before his death.

Mr. B——s is living, and by what I hear enjoys good health.

MORTIMER STREET,
Nov. 27th, 1782.

CASE III.

Extract of a Letter to the Author from Mr. Hugh Stevenſon, Surgeon at Egham, giving an account of his ſufferings from the ſtone in the bladder, and the relief he obtained from the uſe of ſolvents.

"ABOUT twelve years ago, from want of reſt, and continual pain, (which was daily encreaſing, in ſpite of the many powerful medicines taken to relieve me) my fleſh was waſted, my appetite decreaſing; night ſweats, with ſwelled legs came on. I could not walk a quarter of a mile, could not ride on horſeback, could not bear the motion of a coach, except on turf, or very ſmooth road, without ſevere pain and making

making bloody water. I could not lie in bed above a quarter of an hour at a time, from an irritation to make water, then did not make above half an ounce at a time, and that by drops, with very acute pain; when turning in bed, which I was obliged to do every time I awoke, the ſenſation from the ſtone rolling in the bladder, made the whole ſurface of the body ſo irritable, that, if any part of the ſheet or bed cloaths touched me, it felt like cutting with an edged inſtrument; ſo that Mrs. Stevenſon was always obliged to ſupport the cloaths while turning.

THUS circumſtanced, I was told of much benefit being received by taking a medicine advertiſed by the name of *Adams's Solvent*; having an opportunity to taſte it, and diſcovering nothing cor-

rofive or unpleafant in it; tempted by the fmallnefs of the quantity neceffary to be taken, I determined, though without faith, to give it a few weeks trial.

I TOOK it nearly in the manner and quantity directed in the printed paper, wrapped round each bottle, viz. two tea fpoonfuls night and morning in veal broth, barley water, milk and water, &c. which I encreafed in a fortnight to three tea fpoonfuls at night.

I HAD not taken but two of the five fhilling bottles, when I thought fome of my fevereft fymptoms were not fo acute; by this encouraged to perfevere, in three months I felt fenfible relief, made water with lefs pain, and at longer diftances; in fix months I could fleep found an hour and a half at a time

without

without irritation to make water; could walk a mile, and bear the motion of a carriage moving gently.

At the end of twelve months, ſtill continuing the uſe of the ſolvent, I could bear the motion of a hackney-coach over the ſtreets of London, with but little inconvenience; could lie in bed for two hours and a half, without irritation to make water; could turn in bed without pain, or even feeling the motion of a ſtone. My health was by no means hurt by the uſe of the medicine, but on the contrary, I eat, drank, and ſlept better than before; and though I by no means could call my then ſituation a perfect cure, yet I felt myſelf comparatively happier than if I had never been ill.

I FOR two years afterwards continued the medicine in ſmaller quantity, and am at this time, I thank God, in perfect health; and what little difficulty remains in making water, I impute to a diſeaſed ſtate of the neck of the bladder and adjacent parts, from the injury they had received from the ſtone, when ſo many years irritating and laying on them; as well as from frequent returns of tumid and inflamed bleeding piles.

FROM a tendency to make coſtive, and rather heat, I have when taking the medicine, abſtained from every heating cauſe, by meat, drink, exerciſe, &c. and if from cold, or any other accidental cauſe, fever came on, I diſcontinued its uſe, 'till theſe ſymptoms by proper medicines and regimen were removed.

Caſtor

Caſtor oil, ſoap, and rhubarb, and large glyſters, &c. were occaſionally uſed to counteract its aſtringency.

SINCE I have taken Adams's Solvent, nothing has come away in the form of a ſtone, but for the firſt ſeven months, the water was turbid when made; and immediately depoſited a quantity of impalpable powder. When dry, this powder ſhewed no ſaline chryſtals, nor did it diſſolve in warm water, but immediately ſubſided. Does not the above appearance give reaſon to ſuppoſe that the impalpable powder was a part of the ſtone diſſolved? As by a continuance of the muddy diſcharge, the pain decreaſed and gradually diſappeared; is there not ſome reaſon to ſuppoſe the ſtone is diſſolved, or at leaſt rendered ſmooth, ſo as to give leſs pain? If only

leſſened or made ſmooth, would it not ſometimes fall upon the neck of the bladder, or obſtruct the diſcharge of urine, which is not the caſe? If the ſtone is not diſſolved, (which I flatter myſelf it is) it muſt have adhered, or is confined in a ſac, and ſo not felt.

BUT let me not *theoriſe*, only return thanks to *Almighty God!* for the happineſs I now enjoy, in being reſtored from a ſtate of the greateſt miſery and diſtreſs, to a ſtate of perfect health.

I moſt ſincerely wiſh that you,

EGHAM, Sir, &c. &c."

Dec. 20th, 1782.

LIEUT. GENERAL JOHN MACKENZIE, Commandant of the Chatham diviſion of Marines, has been ſo obliging to permit my mentioning, that he has taken Ju-

rin's

rin's lixivium for the gravel and ſtones in the kidnies for many years, and with ſuch benefit as to be induced ſtill to continue it; without having found any bad conſequences whatever reſulting therefrom.

I WAS alſo favoured laſt October, with the particulars of the following caſe, which I had forgot, from the gentleman who is the ſubject of it; for I had opportunities of ſeeing him ſometimes when he was under his courſe, and at frequent intervals ever ſince.

HE alſo very kindly gave me leave (for the good of mankind) to publiſh his name.

SIR JOHN PRINGLE frequently mentioned this caſe with peculiar pleaſure.

CASE

CASE IV.

SIR JOHN MYLNE, Bart. of Chelſea, Governor of Cowes Caſtle, &c. had been for ſeveral years afflicted with the gravel, and had paſſed a great number of ſtones of different ſizes.

IN the Spring of 1771, the ſymptoms of a ſtone in the bladder came on with great violence, which induced him to attempt a journey to town, by ſhort ſtages, and in exceſſive pain, for advice.

HE put himſelf under the care of the late Sir John Pringle, and at his deſire, was ſearched by an eminent ſurgeon, who found a ſtone, and made him hear the inſtrument ring upon it. Upon which, he was put on a courſe of Lane's

lixi-

lixivium twice a day, and injoined the ſtricteſt regimen; which he carefully complied with.

He perſiſted in this courſe (with ſcarcely any intervals) for two years, when he was again ſearched by the ſame ſurgeon, who felt the ſtone, but thought it was diminiſhed to the ſize of an olive, and which he might probably ſoon paſs by the urethra.

He went on after that near two years more, and during that long courſe paſſed ſeveral ſtones (which he once ſhewed me) ſome of them ſeemed to be parts of larger ones, and tallied with one another.

At the end of that period he left it off entirely, and has enjoyed a good ſtate of health ever ſince, (tho' by his own acknow-

acknowledgment in his eighty-ſecond year) free from all ſymptoms of the ſtone, excepting that he cannot hold his urine quite ſo long, as before he had the diſtemper.

Now to place the laſt two caſes in as unfavourable a point of view for the ſolvents as they can poſſibly bear, I ſhall ſuppoſe that ſtones have always been, and ſtill are, in theſe gentlemen's bladders, notwithſtanding appearances to the contrary.

On this ſuppoſition, I aſk, are the lixivia, therefore, to be entirely reprobated? Have they not procured them eaſe and comfort for a number of years, in the laſt gentleman's caſe even to a very advanced age.

CON-

CONCLUSION.

I SHALL conclude with ſaying a few words, reſpecting myſelf.

I HAVE certainly received great benefit from the uſe of the lixivia; being able to bear a carriage on the pavement, and to walk five or ſix miles without the ſmalleſt uneaſineſs. The only inconvenience remaining (and which I muſt not expect to be ever entirely freed from) is, that I cannot hold my urine, (except when in bed) above two or three hours at a time, ſometimes not ſo long.

IT is now twenty months ſince I began the uſe of it; the intervals of reſt are mentioned before, excepting from Auguſt the 7th to September 24th, 1782.

1782. From that time I took it to November 20th, and probably may make the preſent interval ſtill longer than the laſt ; for I propoſe perſevering in what has proved ſo ſalutary, for a conſiderable time longer, even though there ſhould be no apparent neceſſity for it.

EXPERIMENTS

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COMPARATIVE STRENGTH

OF SOME OF THE

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SOME time in the end of May, 1781, ſoon after I began the courſe of Doctor Jurin's lixivium; I thought proper for my own ſatisfaction, to repeat the Doctor's experiment mentioned in his printed caſe; that the genuineneſs of the medicine might be aſcertained.

EXPERIMENT I.

I PUT a ſmall ſtone, weighing two grains, which I had myſelf paſſed, into a phial, with a tea ſpoonful of the lixivium, and two table ſpoonfuls of ſoft water; but the ſtone was ſo far from being diſſolved in two days, that it was not half diſſolved in a week. I then added another tea ſpoonful of the lixivium to the ſame liquor, and kept it in a phial with a glaſs ſtopper; in another week it was in a manner entirely diſſolved.

ABOUT the middle of July in the ſame year, I got a half pint bottle of Blackrie's lixivium from Slater and Co.

Chy-

Chymiſts in the Poultry, with an intention to compare its ſolvent powers with that of Jurin's.

EXPERIMENT II.

I MADE the ſame experiment with a tea ſpoonful of Blackrie's, which I had done with the former, and it anſwered exactly; the ſtone being diſſolved in two days.

THIS made me conclude that Langley's, from ſome cauſe or other, (perhaps from not excluding the air from it by a glaſs ſtopper) was not of the ſtrength Dr. Jurin intended it.

THIS lixivium (I mean Jurin's) has the particularity of having the lime left floating in it.

DOCTOR JURIN's experiment not anſwering as I expected, was the reaſon of my leaving it off, as before mentioned.

ABOUT the middle of January 1782, I got a bottle of Lane's lixivium, and having alſo ſome of Blackrie's, I repeated Dr. Jurin's experiment with both as follows.

EXPERIMENT III.

A HARD fragment of a ſtone which I procured from Mr. Hunter, was diſ-

ſolved

ſolved in Blackrie's lixivium, &c. in four days, whereas another fragment of the ſame ſtone, and of nearly the ſame weight, in Lane's, wanted half a grain to be diſſolved in five days.

But as I, in my own opinion, was not ſufficiently exact as to the quantity of lixivium, and water, I repeated the experiment as follows.

EXPERIMENT IV.

I took two fragments of the ſame ſtone, weighing nearly ten grains each, and put them into two different phials, with ſeventy drops of each lixivium (dropped from phials whoſe glaſs ſtop-

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pers fitted each exactly well) and one ounce of New River water.

When they had ſtood a week over the parlour chimney piece; I weighed them. The ſtone in Blackrie's had loſt four grains, and that in Lane's only two.

I then dropped thirty drops of each lixivium into their reſpective phials, without adding any water, and left them ſtanding for another week. Blackrie's was then reduced to three grains and a half, and Lane's only to ſix grains and a quarter.

The taſte and warmth in the ſtomach ſeemed to be in the ſame proportion, for one tea ſpoonful of Blackrie's

was

was as ſtrong, and pungent, as two of the other.

I PURCHASED a ſmall phial of Adams's ſolvent, which held not quite three ounces, and coſt five ſhillings and ſixpence. It is tranſparent, but of a dark brown colour.

EXPERIMENT V.

MAY 21ſt, 1782, I put a fragment of a hard ſtone, weighing four grains into a wide mouthed phial, and dropping ſeventy drops of Adams's ſolvent into an ounce meaſure, filled it up with water, and poured the mixture on the ſtone in the phial, which was carefully corked.

FOUR

FOUR grains exactly of the ſame ſtone had ſeventy drops of Blackrie's, and the ſame quantity of water as the other put upon it, in a ſimilar corked phial: the two phials being ſet in the ſame heat.

MAY 26th, Blackrie's was completely diſſolved; and Adams's had only loſt three quarters of a grain. I let it ſtand 'till June 1ſt, when it weighed exactly two grains and a half.

I SHALL not from theſe experiments draw any concluſions in favour of one ſolvent in preference to the reſt; let every one judge for himſelf: my aim is to be uſeful to the public in general, not to promote the emolument of any individual. I doubt not but all the different ſolvents I have mentioned have

been

been of great uſe to many, and have each their partiſans.

In the printed directions given with them, the quantity to be taken is properly enough adjuſted to their ſtrength. Of Blackrie's only one tea ſpoonful; Langley's, and Lane's, two; and Adams's three, twice a day.

The compoſition of Blackrie's and Lane's is made no ſecret of. That of Langley's, though uſhered into public notice under the name of an eminent phyſician, whoſe caſe ſpeaks of the benefit he received from it forty years ago, is in ſome degree a ſecret.

But Mr. Perry, from the advertiſement of his pamphlet recommending Adams's, (for I have not read the pam-

phlet itſelf) diſclaims its being of the ſame nature with the reſt, and even explodes the powers of ſoap-lye and quick lime, as a ſolvent altogether; on which I ſhall make no comment.

THE means uſed to diſguiſe Adams's, happened to be diſagreeable to me, with others it may have a different effect; and where the irritations are exceſſive, from the mildneſs of its nature, and the ſedative ingredient it contains, it may poſſibly be preferable to any of them. Though indeed the ſame end may be anſwered with the others, by taking them in ſmaller doſes, and adding an opiate occaſionally. In the directions for the taking of Blackrie's, this is recommended.

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