year, Dr. Hammond joined me at the Preston Station, and we went on to Blackpool together. On our way, I purposely avoided speaking of the case, telling him that I wished for his independent judgment concerning it. On our arrival, Dr. Hardman was in attendance as usual; and our new colleague proceeded to the investigation, readily establishing the diagnosis. I would here just observe that, in the interval between this visit and the period of the operative proceeding, there had been no sensible abatement of the physical signs as revealed by percussion and auscultation. In this state of things, our anxious discussion had regard purely to the question of what should be done for the patient's immediate relief; the symptoms having become almost as severe as they had been a week previously, when the mechanical appliance had been so successfully used. We all agreed that only some such procedure as that employed on the former occasion could by possibility avert the speedy extinction of life.

Having thought much of the case in the interval, I now proposed a certain modification of what we had done before—in this way: that a larger trocar and cannula should be introduced, and that, on withdrawal of the former, to the latter should be attached a long flexible tube, whose inferior extremity should be placed, and for a considerable time be maintained, in a bowl of water. This was agreed to; and Dr. Hardman is entitled to all praise for the patience and the skill with which he overcame the difficulties of carrying out the scheme. And now to avoid any undue repetition, and any material extension of this account beyond the assigned limits, I will say simply that the entire process realised our best anticipations. Air, and air only, bubbled from the water, which, of course, prevented regress. An opiate was administered, and Dr. Hardman remained with him through the night; the mechanical appliance being maintained *in situ* for some hours, so that greater probability might be afforded of some cohesive union taking place between the costal pleura and that of the collapsed lung. On seeing the patient the following morning, we found that a comparatively good night had been experienced, that the breathing was greatly improved, and that there was corresponding alleviation of all the other symptoms.

After this period the improvement went on continuously, with only slight drawbacks, in no respect distinguishing the case from others of a like nature. I saw him at intervals for two months after the later operation, and Dr. Hammond several times; Dr. Hardman, of course, being in constant attendance. I will only so far speak of the sequel as to say that, after this second *paracentesis*, the metallic tinkling and amphoric resonance progressively ceased, and that a dull percussion sound gradually displayed itself in the region wherein the former had previously been evidenced. All the other symptoms now abated, strength, however, was but very slowly regained, and I am informed that, at the time when I write, he is still but weak, though he remains quite free from the old and more distressing symptoms.

I have thought it right to bring this case before the profession, as I am not myself aware that there is much, if any, recorded experience precisely corresponding. Mechanically to relieve the chest in cases of pneumothorax is mentioned by several writers as a feasible practice; and I have an impression that I have somewhere read of its being done, with temporary relief, a few hours before death in cases of confirmed phthisis.

Referring to the practice in question, Dr. Copland, in his article on Pneumothorax, says:—"I am aware that the propriety of resorting to this mode of relief has been questioned; but an instantly impending fatal result has to be averted; and in some instances it may be averted for a considerable time, almost always for a short time, and possibly for months, or even years, by resorting to this operation. I believe that recourse to this operation should not be delayed when pneumothorax has occurred at an early period of phthisis, or when the patient is young, not greatly reduced, or whilst he has not advanced very nearly to a probable termination of a disease, which would certainly end fatally, even if perforation of the pleura had not taken place. The pain and risk of the operation are nothing in comparison with the continued distress experienced during the pneumothorax; and, although relief may be only temporary, the operation may be repeated several times without incurring the risk of life, but, on the contrary, greatly diminishing it." Thus much from Copland, who to the foregoing passage appends a note as under:—

"In 1833, a case of pneumothorax occurred in my practice, at an early stage of phthisis; the patient being young and robust, and not having lost flesh or strength. The nature of the mischief was prominently characterised; the heart was pushed remarkably far to the right side; and the rational and physical signs were all marked and extreme; the dyspnoea and distress. I advised that an opening should be made for the exit of the air; and the friends of the patient desired that Sir A. Cooper should make it. We met a few hours afterwards;

he admitted his ignorance of the nature of the lesion. I fully explained the cause of the symptoms, and of their extreme urgency; but he refused to perform the operation; and stated that he had never performed it with the view of letting out air, and that he would not now do anything so novel, although he would have been ready to undertake it when he was a younger man. Having heard Sir Astley's determination, the patient's friends would not allow the operation to be resorted to by anyone else; and the patient died asphyxiated a few hours afterwards. The operation, if it had been resorted to in this case, might have prolonged life for a very considerable period."

MEDIAN LITHOTOMY.*

By WILLIAM CADGE, F.R.C.S.,

Surgeon to the Norfolk and Norwich Hospital.

FOR some years after its introduction to English practice, it must be admitted that median lithotomy received abundant discussion and a good welcome; many surgeons of distinction wrote and spoke highly in its favour; cases from all possible sources were anxiously sought for and garnered up, and a rich harvest of success was confidently predicted. For the last ten years, however—I may say since the publication of the last edition of Mr. Allarton's work on *Median Lithotomy*—much less has been said and written on the subject; enthusiasm has cooled; experience has grown; and it will not be considered out of place now to inquire, what is the tale told by this matured experience? Does median lithotomy still find favour with practical surgeons, and how will it now compare with the old time-honoured lateral operation?

As a contribution helping to decide these points, I desire to report, briefly and without going into minute details of cases, the results of my own personal observation and experience of median lithotomy, together with the impressions left on my mind by that experience. I may say that, when the operation was first introduced, I received it doubtfully and with hesitation, chiefly on the anatomical ground that insufficient room would be found for the removal, by fair means, of any but very small calculi. Having adopted it, and finding it suitable in these cases, I gave it a more extended trial. Stones have been removed, weighing from ten grains up to nearly five ounces, from patients of all ages—from 18 months up to 78 years.

Ninety persons have undergone median lithotomy; 54 by myself, and 36 by my colleagues and friends in operations at almost all of which I have been present and assisted. Of these 90 patients, 16 died: 26 were under 20 years, with 1 death; 5 from 20 to 40 years, with no death; 5 from 40 to 50 years, with no death; 13 from 50 to 60 years, with 3 deaths; 36 from 60 to 70 years, with 12 deaths; 5 from 70 to 80, with no death. This gives a mortality of 1 in $5\frac{2}{3}$; whereas, in the total of cases in the Norwich Hospital, amounting now to nearly 1,000, the mortality is about 1 in $7\frac{1}{2}$; but the average age of the median patients is considerably above that of the general list. If we take the cases of adult lithotomy, or those, say, of over 40 years, we find that the mortality of the median cases is 1 in 4, and of the large hospital total it is the same, or very nearly the same.

But I prefer to take my own fifty-four cases. I have fuller notes of, and more precise information concerning them, and can compare them more accurately with the same number of cases of lateral lithotomy and of lithotripsy; and although these numbers are too small and insignificant from which to draw statistical deductions of real value, they still may convey useful information, seeing that the three sets of cases have all been done by one hand, with the same amount of care, and without any principle of selection other than what was thought proper for each case. I will merely premise that at first, and again of late, the larger stones were reserved for lateral lithotomy; but for some years nearly all the cases of both large and small stones were treated by the median method: thus, the average weight of stone in 54 median cases was five drachms and five grains; and in 54 lateral cases, one ounce and two grains.

Now, as we know, speaking roughly, that the danger of lithotomy increases in direct ratio to the size of the stone, we should expect that the mortality would be less after the median than after the lateral cases; but it was not, for I find that, of 54 median cases, ten died; of 54 lateral cases, eight died. On the other hand, it is equally true, still speaking roughly, that the danger of lithotomy increases with increasing age; but I find that the average age of 54 median cases was $48\frac{1}{2}$ years, and the average age of 54 lateral cases was barely 46 years. Separating them still further, so as to ascertain the result of the adult cases, it appears that, of 54 median cases, 40 were over 40 years, with

* Read before the Surgical Section at the Annual Meeting of the British Medical Association in London, August 1873.

9 deaths, 1 in 4½; of 54 lateral cases, 34 were over 40 years, with 7 deaths, 1 in 5.

I need not analyse these figures any further; but having mentioned lithotripsy, I will just say that of 54 cases of lithotripsy the average age was rather over 63 years, and that this number included six deaths, or 1 in 9. These 162 operations include nearly but not quite all that I have done both in hospital and in private practice; they do comprise all the median cases, and all the lateral and lithotripsy cases fit for comparison. There have been a few partial operations and a few uncompleted lithotripsy cases, the results of which were undecided, but no fatal case has been omitted; indeed, as will be presently seen, some cases have been described as fatal in which the deaths have been but slightly and very indirectly connected with the operation. Except in one or two instances in which the patients were almost moribund when first brought under notice, I have never refused to operate by one or other method, no matter how diseased the prostate gland or bladder may have been, or what other complications may have existed, including cases of Bright's and other kidney-disease, heart-disease, and paralysis. There is an old and a wise rule at the Norwich Hospital which makes the assent of the majority of the medical and surgical staff necessary before a surgeon can operate for stone; and in these complicated cases the verdict has not unfrequently been—notably twice within the last month—"operate, it is right to do so, but the case is very unfavourable." On the other hand, I am aware of a few cases in which, either from the great age of the patient and mildness of the symptoms, or from the great size of the stone and the slight inconvenience produced by it (a combination occasionally met with), no operation has been desired or recommended. I have said that there were ten deaths out of the fifty-four cases of median lithotomy, the causes of which were as follows.

I. Age 14. Convulsions and death in twenty hours. No *post mortem* examination.

II. Age 66. Death on seventh day from coma. *Post mortem* examination: cerebral and meningeal congestion: kidneys diseased: pyelitis: no urinary infiltration: prostate very large.

III. Age 66. Violent rigors, almost convulsions, on eighth day; death same day. No infiltration or sign of pelvic mischief. The patient had severe ague five years before.

IV. Age 64. Death from peritonitis coming on suddenly three months after operation. Wound healed. Probably pyæmia.

V. Age 62. Death on fifteenth day from diphtheria and diarrhoea. Old hemiplegia. Slight wound of rectum.

VI. Age 52. Death on fifteenth day from pyæmia and phlebitis of veins of legs.

VII. Age 66. Death on seventy-fifth day from exhaustion. Extensive disease of kidneys and pyelitis. Wound nearly healed. Prostate very large. Had chronic retention and phosphatic stone.

VIII. Age 64. Death on fourteenth day from pyæmia.

IX. Age 60. Death on tenth day from phlebitis of crural veins and exhaustion.

X. Age 64. Death on twenty-first day from pyæmia. Wound healed.

There were eight deaths out of the fifty-four cases of lateral operation, as follows.

I. Age 60. Death in twenty-four hours from shock and hæmorrhage. Large stone.

II. Age 68. Death on seventh day from pyæmia and abscess of liver.

III. Age 70. Death on tenth day from exhaustion. Much ecchymosis behind bladder. No urinary infiltration. Kidneys fatty. Liver pale, soft, and fatty.

IV. Age 11. Death on sixteenth day from pyæmia.

V. Age 73. Death same day from shock and hæmorrhage. Large mulberry stone.

VI. Age 72. Death on eighth day from exhaustion. Stone in kidneys, and extensive disease of these organs.

VII. Age 70. Death on twelfth day from exhaustion. Bladder sacculated. Encysted stone. Kidneys diseased.

VIII. Age 71. Death on fourth day from exhaustion and hæmorrhage. No sign of infiltration of urine. Kidneys diseased. Prostate very large. Stone large.

It thus appears that pyæmia was the cause of death in nearly half the cases; that pyelitis and chronic kidney-disease was the next most frequent cause; that shock and free hæmorrhage combined, occurring in old and feeble subjects with large prostate and large stone, caused two, perhaps I may say three, deaths; but that there was not one unequivocal death from urinary extravasation and pelvic cellulitis. Peritonitis existed in two or three instances, but it was clearly due to pyæmia and phlebitis. Phlebitis of the crural veins, in my experience, is one of the most common mishaps which follow lithotomy. It is not always of a septic and fatal character, but sometimes of a non-septic

and local character, allowing, probably, the patient to recover, but still endangering that recovery; and I may be permitted to warn those surgeons who may not be frequently called on to treat stone-patients, to be very watchful for every slight febrile symptom after lithotomy, and especially to ascertain if there be pain and tenderness along the saphenous veins.

I will refer now to some points of comparison between median and lateral lithotomy, as shown in the experience just related.

1. As to the *mortality*: it would seem that, age for age, there is nothing to choose between them; nor does there occur to me any anatomical or other ground for thinking that there ought to be any advantage of one over the other. The median incision, it is true, is smaller than the lateral; but it traverses very much the same structures, and in some cases it leads, by its very limited extent, to a positive danger of over-dilatation and laceration. What I wrote ten years ago, that "any merit the median plan might have would be found to be distinct from the mere mortality", is still and will continue to be true, because "deaths after lithotomy depend mostly on causes other than those due to the mode and the extent to which the incisions are carried."

2. As to the *difficulty of the operation*: I believe that it requires more care and more skill to carry out with accuracy the steps of the median than of the lateral operation. The space is so limited by the rectum below, that the slightest deviation of the knife in that direction, or the dragging of a full-sized rough stone through the small wound, must endanger that bowel; and I at once admit that, whereas I cannot remember injuring the rectum more than once in lateral, I have done so at least four or five times in median operations. This may have been due to want of skill; but I have heard the same admission from other and probably more expert lithotomists than myself. In children, where, as a rule, the incisions should be free, so as to permit the easy entrance of the finger or instruments into the bladder, I have found the narrow limits of the median incision so inconvenient, and so prone to lead to the serious disaster of separating entirely the urethra and pushing the bladder away from its connections, that I have wholly relinquished the median operation in very young patients. The lateral is just as safe, easier of performance, and any increased time in the recovery and healing of the larger wound is of no consequence to a young child. Again, the extraction of the stone is a work of more nicety and difficulty in the median than in the lateral operation; in either, this is incomparably the most important step of the operation; and when the prostate gland is enlarged, as is frequently the case in patients over sixty, the importance and difficulty of extracting the stone are vastly augmented. I do not pretend to speak of the extent to which dilatation of the neck of the living bladder may go, for there are no means of ascertaining it; but I have a firm belief that, in most cases of median lithotomy, there is some rupture of mucous and submucous tissue; and when the stone is of any size, and the prostate is enlarged, then inevitably the two lateral lobes are separated by rupture along the thin rectal aspect of the neck of the bladder. In more than one case, I have been conscious of this occurring during extraction. No harm to the patient resulted; but it is not a desirable or scientific proceeding. In other cases, where the stone was of some magnitude, I have divided the prostate laterally or bilaterally. In one instance, I removed a calculus which weighed 4½ ounces, and this has been held up as proof of what the median operation is capable; but I would rather allude to it as a warning against the operation, than as an example to follow, for there was much difficulty in the extraction. I was conscious of a considerable yielding of the prostate; and even at the external wound there was a rupture of the perineum almost into the anus. The patient recovered slowly and with difficulty, and I believe that a slight perineal fistula remained. In the lateral operation, on the other hand, should the stone prove to be of considerable size, it is easy to enlarge the incision to a sufficient extent; and it will be the surgeon's own fault if he use an undue amount of force in extraction. In cases of stone of unusual size, and when there is no great fear of urinary infiltration, I prefer to extend the incisions in the direction already made, rather than to make a fresh division of the opposite side. In one case, I assisted a friend to remove a large mulberry stone which weighed just eight ounces; and it was accomplished safely by applying the knife two or three times to the resisting tissues, while the stone was firmly but not too forcibly drawn forwards.

3. One more point for comparison I would refer to—viz., *hæmorrhage*. This mischance has, in my practice, been greatly more frequent after median than after lateral operations. In the latter, it has rarely been necessary to tie any vessel or use the plug; if the knife be kept properly below the level of the artery of the bulb, there will seldom be any bleeding to be called troublesome; but in the median incision it is almost—I believe I may say quite—impossible to avoid wounding the bulb, which projects downwards across the line which

the knife must traverse. When the bleeding goes on to too free an amount, it is useless, in the small central wound, to search for the bleeding-point, even if there were any one vessel to tie; but usually, as I have said, it is the bulbous structure which affords the blood, and the plug is the proper remedy; and I am free to allow that, with the plug fairly pushed in *above* the tube chiefly, arrest is easy—more easy, indeed, than to compress the artery of the bulb by the plug in lateral lithotomy.

If, then, it be admitted that the median operation is unsuited for children; that, for the average of cases, the mortality is as great as in lateral lithotomy; that the operation is more difficult; that hæmorrhage is more troublesome, and wound of the rectum more frequent, than after lateral lithotomy—it will naturally be asked, What are the advantages of the central operation? and to what cases is it applicable?

My present experience teaches me that it is advantageous and suitable only for those patients in whom the stone is of small size—about that of a date or a filbert—and where, for some sufficient reason, lithotomy is not available. Within these narrow limits, median lithotomy is admirable; the incisions are small, and there is but little fear of bleeding or injury to the rectum; the recovery is rapid; the bladder retains the urine, and voids it voluntarily almost from the first; the patient is saved from much of the discomfort of lying in wet sheets with an urinous smell; and the wound heals almost by the first intention. I repeat that, within this limit, the operation is excellent; and every patient who is cured by it may rest assured that he is cured with as little pain, discomfort, and injury, as surgical science is capable of. Beyond this limit, the path becomes thorny and dangerous; and, in the lung run, he who treads it will, I firmly believe, repent and fail to obtain the success which is so dear to all lithotomists. I have traversed that path, but prudence bade me retrace my steps; and I have ventured to think that this imperfect record of my doings may interest some, and enable others, who perchance have fewer opportunities, to profit and guide their practice by my experience.

THE USE AND ABUSE OF NUX VOMICA AND ITS ALKALOIDS.*

By JAMES THOMPSON, M.D., Leamington.

FOR the sake of form, I have named this paper on the use and abuse. Of the first, the *use*, I intend to say but little, as this is known well to all; the *abuse* will be what I desire to make some remarks on. My attention was drawn to the subject by some cases which I have had during the present year, and, as I can find no reference to it in any works on therapeutics which I have been able to consult, I have deemed the subject not unworthy of being considered in this Section. I remember, when a student, spending some time in a house where homœopathy was followed, and the inmates seemed, at all hours of the day, to amuse themselves by swallowing globules and tinctures, the active ingredient of which was said to be derived from *nux vomica*; thus, during the day, they took a sufficient amount of this powerful tonic to feel invigorated and stimulated.

The matter passed out of my mind until recently, when an American gentleman came under my care; he had been sent to England for change of air and scene. He had, from his account, suffered from some cerebral attack, due to excitement and overwork in commercial pursuits. His American physician had prescribed Easton's syrup in drachm-doses three times a day. When I saw him, he was taking such doses several times a day, and had done so for a long time. He was in a highly nervous state, sleepless and excited in manner; he took a dose of syrup, and then felt better; but the stimulation was temporary, and then he was more depressed than ever, and he required another dose before he could attempt anything. At first, I did not realise the cause of this state. Medicine and regimen were of no avail, as he continued to take the syrup. After some persuasion, he consented to give it up, although he declared he thought he would die. I advised a course of mineral water, a Turkish bath twice a week, and a shower bath every morning. In a fortnight's time he was all right, and has continued so up to the present time.

Now this patient seemed on the verge of what was very like delirium tremens, and I have no doubt that the strychnine in the syrup was the cause. He drank nothing save a couple of glasses of sherry at dinner and lunch.

Among my patients I have a highly hysterical lady of middle age, much in society, who, when she is going out, takes twenty or thirty

drops of tincture of *nux vomica* in a little water. Formerly she took sal volatile, and she says she finds the tincture much the more potent. She is aware of the power of the drug, and she only uses it on particular occasions. When much is used, she finds herself so excitable that she takes some aperient medicine for some days and a dose of chloral at bedtime. I find, on inquiring, that a medical man, whom she met at an hotel when travelling, had first suggested it to her.

A medical friend, whom I asked if he had ever noticed any deleterious effects from the use of these medicines, admitted that every day he longed for 11 A.M. to come, as, for a very long time, he had taken a dose at that hour, and that he could not get through his work without it. I made an experiment on myself to ascertain the exact effects, and, although I never take any stimulant before dinner, I soon found I could not get on without it. I took the syrup in drachm-doses once daily for three weeks, and in the fourth week I found myself so shaky, with crampy pains in the abdomen and legs, that I was warned to give up. The next week I was low and depressed, but soon recovered. I satisfied myself that it was producing much the same effects as repeated nips of brandy or glasses of sherry.

From inquiries I have made, I am satisfied that this form of indulgence is on the increase. Prescriptions containing preparation of strychnine are treasured up, and sent to the chemist to be dispensed whenever the holder feels a little low. I am much impressed with the necessity of marking such prescriptions, so that they may not be dispensed without a countersign. Recently a patient drank at a draught eight ounces of a mixture, which she had found comforting on a former occasion; it produced most serious symptoms, and might have proved fatal had not assistance been speedily summoned and active measures taken.

RETROSPECTIVE JOTTINGS.

By C. M. DURRANT, M.D.,
Physician to the East Suffolk and Ipswich Hospital.

It has been often, and truly, remarked that a very large field of unproductive but valuable matter has been, and still is, allowed to lie waste for want, not so much of cultivation, as of circulating for practical purposes the extensive experience which almost every medical practitioner possesses, even if he be only of comparatively few years' standing. To leave metaphor, I would say that, if only one-half of the practitioners throughout the three kingdoms were to detail the practical facts which have been impressed upon their own minds, the profession would possess an amount of experience that, if properly collated, would be invaluable. Believing, as I do, that the advance of our knowledge of disease will be in proportion to our future understanding, with certainty, the functions and derangements of the nervous system, how helpful would be a constant afflux from all parts of the kingdom, especially in reference to the conditions of this economy. That we are continually passing through cycles of diseases, mainly caused by disturbance of nerve tension, cannot, I think, be doubted; and although in our present ignorance we attribute, with the vulgar, all kinds of noxious influence to the weather, I am persuaded that the time will come when we shall be able to associate, with far more certainty than at present, meteorological and barometric changes with direct nervous influences, either functional or organic.

How frequently do we notice a complete absence of expected disease during weather to which we, in our present wisdom, feel disposed to attribute everything that is bad; while, on the contrary, how often, in the finest, and apparently most health-giving weather, do we find the largest amount of sickness, and often a wide-spread epidemic. To take a simple example, I need only allude to ordinary catarrhal affections, to show that, if the peculiar paresis upon which these depend were better understood, the accumulated evidence of the many would become very valuable in reference to locality as an exciting disturber of nerve influence. Again, the phenomena of asthma, chorea, and many other affections that occur, more or less, in groups, might be largely elucidated by the repeated addition of wide-spread observation.

I merely set down these ideas; believing that, if they were worked out, a mass of what is now but wasted experience would furnish, in time, a basis upon which the most valuable data might be obtained and a more exact knowledge acquired.

SPINAL AFFECTIONS.

I do not know whether it has struck other practitioners, but I have been impressed myself with the fact of the increase of spinal paralysis generally, and of certain forms of the malady in particular. In referring to this, however, I confine myself strictly to the symptoms produced

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