In all the cases, we have had a very great amount of thickening from fibroid deposit in the track of the wire ligature, producing a great amount of lateral support to the weakened vessels, and persistent for a considerable time, as you may have seen by the patients who have returned for inspection, at a period of many months subsequent to their discharge from the hospital. In patients whom I have seen years after a precisely similar operation, effected by means of an instrument acting with wire in the same manner, but upon a different principle, which I then employed, the veins have remained quite impervious, with a hard, firm, constricted portion, or indurated ring, at the site of the operation. In most of the cases, I have withdrawn the wire before it has quite cut through all the included tissues, and the results have been equally good as in those in which the loop has cut its way clean through. I believe, therefore, that it is not always necessary to prolong the cure by waiting for this result, inasmuch as a great deal of fibrous tissue, not forming part of the venous channels, is necessarily included in the ligature, and often prolongs the process of separation after the veins have been entirely occluded. A dense, hard, and resisting ring of fibroid tissue is formed around the veins by the action of the ligature, which resists the pressure of the blood outwards, and prevents redistension. And not the least of the advantages of the apparatus I have described is the power that it gives us of withdrawing the ligature without pain or disturbance, when it is evident that the desired result has been arrived at, as ascertained by the deposit of fibrine and the small length of the wire yet remaining engaged in the tissues.

In this method, gentlemen, it appears to me that we have all the advantages of subcutaneous treatment and thin metallic pressure, combined with a continuous and equable traction, by which we obtain a division of the diseased veins without danger of hæmorrhage, with little or no pain to the patient, without the repetition of a most excruciating process of tightening or screwing up the ligature upon the inflamed tissues; and we get, in a short course of treatment, complete division or occlusion of the veins, no open sore (which, in such cases, is very often very slow to heal), and no suppuration which may endanger the entrance of pus into the veins. And this is combined with the power of disengaging the wire compress; with little pain and no disturbance of the parts, which might set up the process of disintegration of the clot or suppuration of the vein; and with a simplicity of construction and ease of manipulation which leaves little to be desired in the way of improvement.

THE PROVISION OF MEDICAL ATTENDANCE ON THE INDEPENDENT POOR BY PROVIDENT DISPENSARIES.*

By C. B. NANKIVELL, M.D., Torquay.

MR. PRESIDENT AND GENTLEMEN,—It may perhaps be thought that the subject which I am about to bring before your notice is not altogether appropriate to this Section of the Association, which has for its more especial object the prevention rather than the cure of disease. But if we consider the very large number of poor persons placed between the class of paupers on the one hand, and those capable of procuring medical advice for themselves on the other; and if we further reflect how entirely these poor people rely on their daily labour for the supply of all the necessities of life, and how much their ability to labour, and consequent means of subsistence, depend on their maintenance of health; we shall at once see how necessary it is for the early arrest, if not for the prevention, of disease, that this large class of the population should have placed within its reach prompt and efficient medical attendance.

Early medical advice in the diseases of the poor is likewise most important, in a sanitary point of view, to the whole community; for it is in the crowded habitations of the most crowded parts of large towns, occupied, as they are, by their most indigent inhabitants, that severe and fatal epidemics usually make their first appearance, and from these localities they extend to other classes of society. On these grounds, it may surely be considered that all associations and institutions which bring ready medical help to those who cannot individually command it for themselves, are essentially of an hygienic character. Their claims on the ground of benevolence, and their importance as a part of sound

political economy, need not be enforced before a meeting of the British Medical Association.

If, then, the preservation of health and the prevention and early cure of disease amongst this class of the industrious poor is so serious and desirable an object, it becomes a question of great moment to ascertain by what means, and to what extent, and with what effect, this object is at present accomplished. The result of this inquiry is already known to the members of this Association. It is well known to be unsatisfactory in the extreme. It is notorious that the system of gratuitous medical charity—the prevailing system in this country—is very defective in its operation, and fraught with evils of great magnitude. There can be no doubt whatever of the great benefits conferred upon the poor by hospitals in various parts of the United Kingdom. These valuable institutions afford to the poorest man the highest medical skill, constant medical supervision, and all the comforts and appliances in sickness which even the most affluent can scarcely more fully obtain. But when we come to the out-patient department of these establishments, and their allies in the same mode of medical provision—the dispensaries existing in all large towns—we find a lamentable deficiency and many faults in carrying out their intentions.

It has been clearly pointed out by Dr. Heslop of Birmingham, and by many others, that the ordinary support of medical charities by privileged subscribers is a financial and sanitary failure. It must, almost of necessity, be inadequate to the purposes for which these institutions were designed, for it is found that the supply of gratuitous medical charity invariably increases its demand. In Manchester, as shown by Sir James Kay Shuttleworth many years ago, the increase of medical charities augmented, in six years, the recipients of such charity from one-eleventh to one-seventh of the population. In Liverpool, Leeds, Birmingham, and other large towns, similar results have been observed. In the course of time the supply becomes unequal to the demand, and many of the suffering expectants of relief are doomed to disappointment, and at a time, perhaps, when such relief is most urgently required. The supply, too, of this charitable bounty, almost always attended with some delay and loss of time to those who seek it, is generally fitful and intermittent, profuse when tickets of recommendation are first given out to the subscribers, scarce, and perhaps exhausted, a few weeks afterwards; and it seems to be everywhere complained, that these recommendations are seldom given to those by whom they are most needed, but to the *protégés*, the servants, and adherents of the subscribers, or to the most active applicants who go about in search of them. And whilst these institutions, so constituted, fail in the supply of prompt and certain medical aid to the great bulk of the proper objects of medical charity, they, and all other modes of gratuitous advice to out-patients, are often attended with much hardship and injustice to the members of our profession. Their unpaid and overworked medical officers are, in many instances, placed in the invidious alternative of wasting much valuable time in attending on trivial and unimportant cases, or of adopting a hasty and routine practice, far from beneficial to the patients or advantageous to medical science, and most mischievous in medical teaching.

A large number also of the out-patients are quite above the necessity of any charitable assistance, and are well able, either separately and individually, or conjointly and by co-operation, to procure medical attendance for themselves. So great injury is done in this way to many struggling medical men, and to the younger members of the profession, that they avoid the neighbourhood of large institutions of this kind as being barren and unprofitable ground. Great, however, as these evils are, physically to the poor, and as opposed to the just interests of the profession, they are trifling in comparison with the injury caused to the working classes by the demoralisation which always attends the profuse and injudicious administration of gratuitous medical charities. This is one of the consequences of these institutions which has not yet been sufficiently brought before the public. Their supporters seem to assume that, as the necessities of sickness are not amongst the daily natural wants of mankind, no care or forethought can be expected on the part of the poor in providing against them. No fallacy in social science can be greater or more mischievous than this. It was shown many years ago, and of late years it has been still more clearly proved, that sickness and various moral causes are the most fertile sources of pauperism. Dr. Wallis and Dr. Rogers have estimated sickness, as at present unprovided for, at 72 per cent. among the causes of this, the lowest grade of poverty. The industrious working man, as long as he is in good health, is generally independent of all extraneous aid. It is only when illness, unprovided for, assails him, that he is led to seek the help of charity in the form of gratuitous medical attendance. He thus takes the first step towards reliance on others instead of on his own exertions. The necessity of frugality, forethought, self-reliance, and self-provision is sapped and undermined; and the gate of eleemosynary assistance having been opened by the reception of medical charity, he is allured to become a

* Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in Plymouth, August 1871.

mendicant to other charitable institutions, and is ultimately driven, by his loss of industry and spirit of independence, and the attendant vices of such a state, to the dire necessity of parochial relief. It is scarcely possible to overestimate the injury—the moral and physical degeneration—thus thoughtlessly inflicted on that large stratum of society between the pauper and those capable of individually supplying their own material wants.

It is true that the industrious classes have themselves made most laudable efforts to meet all the exigencies of sickness amongst a limited number of their class, by the establishment of sick clubs; and most valuable have been some of the results of these societies; but their provision for medical attendance has the defect of excluding the women and children of their families, and it has almost invariably been found that these self-supported and self-managed associations beat down the terms of contract with their medical officers to the lowest possible point, whilst they admit amongst their members, without any limit or restriction, many who, from their pecuniary circumstances, should be included in the lists of the private patients of the medical men in their neighbourhood. It is obvious that no department of any society deserves encouragement, which is so unjust to the members of a profession whose generous and philanthropic instincts and traditions have long placed them in the van of every measure which has had for its objects the health and welfare of the public.

Having now described, as briefly as possible, some of the faults and sad consequences of the present provision for medical attendance on the unpauperised poor, it becomes my more agreeable duty to direct your attention to what appears to be the best means of reforming this department of Public Medicine.

In 1829, I became acquainted with Mr. Smith, of Southam, and spent the following winter and spring under his roof, in professional attendance on the patients of his self-supporting dispensary, and of a small hospital which he had established at Southam, also on the plan of partial self-support. To Mr. Smith is due all the credit of first applying the provident principle to this form of medical charity, to the promotion of which he zealously devoted himself by institutions under the title of self-supporting charitable and parochial dispensaries, including an admission of the three classes of patients which this title indicates. During my abode at Southam, I visited all the places in the Midland Counties at which these dispensaries had been established, with a view to ascertain the several causes of their success or failure. On my return, it was agreed by Mr. Smith and myself that it would be better to limit all future efforts to the promotion of the provident principle only; and we drew up some rules for the first dispensary thus formed at Burton-on-Trent.

In 1831, I was urged to settle at Coventry, as the medical officer of a dispensary about to be established there, for the purpose of carrying out the principle of which I had become a warm advocate. I was anxious that the Coventry Provident Dispensary, as I suggested its being called, should serve as a model for dispensaries in other places which might follow our example. We therefore conducted it tentatively for the first two years before finally deciding on its constitution and code of laws; and I can now congratulate those who cordially acted with me on that occasion, that these laws have formed the plan of all subsequent successful institutions of the kind. The Coventry Provident Dispensary still prospers. It has about five thousand free members, from whom it annually receives about £800, and pays to its three acting medical officers about £180 a year each. I mention these facts to show that I am not advocating this system on mere speculative theory, but on the ground of experience and practical knowledge of its successful operation during many years.

The Derby Provident Dispensary, which in 1844 commenced the exclusion of all but provident patients, had, at its last report, more than five thousand free members, from whom it received nearly £1,000 during the year.

The Provident Dispensary at Northampton, a smaller town than Derby or Coventry, received last year from its free members, paying the same rate of subscription as at Coventry and Derby, the extraordinary sum of £1,881, and divided amongst its three medical officers £1,503. The reason of the greater number of free members and larger amount of receipts at Northampton is obvious and instructive. In Northampton, the working-classes have not been demoralised by gratuitous medical charity. Its noble county hospital, though near the town, does not give medical attendance to out-patients at their own homes.

Besides these, there are more than twenty other provident dispensaries, all more or less successful, existing in several parts of England; and here, at Devonport, we have a most satisfactory example of the application of the provident principle to the out-patient department of the Royal Albert Hospital. It seems satisfactory in every respect, except that it applies too large a portion of the free members' payments to the

expenses of the hospital, and gives too little to the medical officers for their work amongst the out-patients.

The success of these several institutions shows how much may be done by the poor to help themselves and to help one another, with a little encouragement and assistance from their more educated and richer neighbours; and the remarkable success of the Northampton Dispensary especially proves how much more may be done, where the working classes have not been spoilt and degenerated by habits of reliance on eleemosynary assistance. Surely, too, from these examples, we may hope and infer that, by a careful and wise co-operation between our profession and the enlightened benevolence of the truly charitable, it would not be difficult to supersede the necessity of entirely gratuitous medical charity, except in the general hospitals of the country. A firm combination of the profession and the public would thus at once bring about a most complete and judicious "reform of out-patient administration."

The effect of such a change of system would be an immense advantage to the poor, whilst it would conduce to the honour and interests of our profession. To every poor man and his family, between the pauper and those capable of paying individually for medical advice, it would offer and supply an easy provision of prompt and efficient medical attendance; prompt, because the small payments of the free member of a provident dispensary would entitle him to medical advice whenever he required it; and efficient, for the Committee would take care that its medical officers were qualified members of the profession. To the medical profession it would hold out an honourable office, in which the duties of the officers would not be the less zealously performed because the value of their services was acknowledged by some pecuniary remuneration. I feel also assured that all the members of my profession would eventually rejoice in the adoption of a system which, instead of humiliating and lowering the character of their poorer patients, would tend to raise them in their social position and moral tone.

In the construction of provident dispensaries, there are some conditions essential to their success, which those who wish to establish them should carefully observe. And I am the more especially anxious to direct your attention to these fundamental conditions, because I have invariably found that it has been the neglect of or departure from them, which has caused the failure of several endeavours to establish institutions of this kind. To bring these leading conditions before your notice has, indeed, been my principal object in writing this paper. As an essential principle, it should always be borne in mind that for the success of this system it must invariably be in accordance with the wants and welfare of the working classes, and with the interests of the members of the medical profession, who form its active and indispensable agents. If conducive to the just interests of both these parties, it can scarcely fail of success.

In the first place, a sufficient contribution should be raised amongst honorary donors and subscribers to pay for the outfit of the dispensary. This sum would vary with the probable number of patients. An adequate annual subscription from honorary subscribers should also be calculated upon, to meet all the expenses of the establishment above the cost of medicine and the payment for medical attendance. This annual sum required would of course also vary with circumstances, but would be less than in an eleemosynary dispensary, on account of the cost of medicines being chiefly defrayed from the payments of the free members.

The free members' weekly payments should be as small as possible, to prevent the exclusion of any poor person above the actual position of a pauper. A penny a week from all adults, and half that amount for each child under the age of remunerative labour, allowing all beyond a certain number of children to be admitted free of payment, are generally found sufficient.

From the sum thus raised from these benefiting members, a certain proportion should be deducted towards, but not more than sufficient to defray, the cost of medicine. The rest should be divided amongst the acting medical officers. The patient thus has the satisfaction of paying for his medicine and medical attendance; and the medical officers are exempted from any direct interest in the quantity or quality of the medicines which they prescribe.

On the admission of a member, and periodically afterwards, he should have the choice of enrolling himself as a patient of the medical officer he may wish to attend him when required; and the payments to the medical officers should be in proportion to the numbers enrolled on their respective lists.

The number of the medical attendants of a provident dispensary should be proportionate to the number of members. One medical officer to every thousand members would probably be a desirable proportion; and, to prevent unfair monopoly in the district of the institution, the appointment of the medical officers should be periodically re-

newed, and reappointments should not take place if there were other eligible and desirable candidates. Periods of five years, as adopted in the Provident Dispensary at Leamington, would probably be found expedient. To protect the interests of the dispensary and the profession from the admission of ineligible free members, it is important that the medical officers should be *ex-officio* members of the Committee.

I have a very strong conviction that it is an indispensable element of success in these institutions, that their control and government should be in the hands of the honorary subscribers. I should be extremely sorry to see provident dispensaries lapse into the form and state of sick clubs, with a spirit of antagonism between the medical officers and their managing patients, and power in the hands of the latter of advertising for medical attendants on the lowest terms; and also with the power of admitting amongst the benefiting members and patients a wealthier class, whose admission might be desirable for the club, but very adverse to the just interests of the profession.

I have seen, with much regret, that my friends at Coventry, on the fortieth anniversary of their Dispensary, as the first material alteration of their original laws, have decided to admit every adult free member to equal rights of government in the Institution with the honorary subscribers. Thus, as the honorary subscribers are not more than forty, whilst the free members amount to several thousands, they have obviously placed the property and government of the Dispensary in the power of the benefited members. They have also, but perhaps unintentionally, adopted the advanced form of government by universal suffrage, with female franchise and vote by ballot. I have great confidence in the governors and free members of the Coventry Dispensary; and as the Committee is fairly formed, I have great hope that the Institution may not suffer from this dangerous experiment, and be left, as suggested by some of the advocates of this change in the plan of provident dispensaries, to the entire support and management of the poor members.

It is surely most important, in the effort now so widely making to extend the system of these dispensaries, not to lose sight of the leading principles and conditions upon which they have been successfully conducted for nearly forty years. It is certainly desirable to see the intelligent and well-conducted of the working classes actively assist in promoting all social measures for their own benefit; but it should be remembered that the object of these dispensaries is not to aid the skilled artisan and higher class of workmen, receiving rewards of their labour adequate to the supply of all their own wants, but to meet a great necessity of a poorer class, some of them, perhaps, on the verge of pauperism, and to prevent their sinking still lower in the scale of poverty. Surely it is not desirable or judicious to leave the support of institutions for such objects to the hard-working poor themselves. Is it not rather a duty, and for the welfare of all classes, that the more affluent should apply a portion of their means, their time, their cultivated intelligence, and their trained and judicious benevolence, to objects of this kind in aid of their poorer neighbours?

I cannot conclude these very incomplete observations on the important effects which would accrue from the general adoption of provident dispensaries without alluding to the advantages which they might supply in the present mode of medical education. We hear continually, not only amongst intelligent and experienced members of the profession, but amongst medical students as well, very general complaints that the annihilation of apprenticeships has deprived the student of the present day of the opportunities which his predecessor enjoyed of acquiring the tact and practical aptitude so necessary in the practice of the profession. I know of no public means which could be so easily and well adapted to this purpose as a dispensary or out-patient department of a hospital conducted on this system, under the direction of skilled medical officers. The advanced student would thus be introduced to the observation and treatment of disease in the way he would have to meet it in after practice; and, from the permanent association of the patient with the institution, he would see every variety of disease at its commencement, throughout its whole course, to its termination, and under any sequelæ or recurrence of the malady which had been brought under his notice. Nor would the medical officers find this kind of attendance troublesome and oppressive. The poor patient who has had the forethought and prudence to provide himself with medical advice is generally grateful for the benefits he receives, and thoughtful for those who confer them.

Since my thirteen years passed at Coventry, I have lived under brighter skies, and in a more picturesque part of my own country; but I still look back to the hours thus employed, not only as the most useful, but as amongst the most agreeable of my life.*

* For further details and information, apply to Mr. Fairlie Clarke, Secretary to the Medical Subcommittee of the "Charity Organisation Society"; and consult the pamphlets of Mr. Becke, Northampton, and Dr. Ford Anderson, Hampstead.

AN ANALYSIS OF STATISTICS OF LATERAL LITHOTOMY.*

By the late WILLIAM KEITH, M.D., M.R.C.S.E.,

Senior Surgeon to the Royal Infirmary, Aberdeen;
Lecturer on Clinical Surgery; etc.

[BETWEEN the time when Dr. Keith published his previous paper on this subject and his death, he operated on *thirteen* additional cases by lithotomy, thus raising the total number to 221. Of these last 13 cases, *two* died, making the total number of deaths 45, or a total mortality of 1 in 4.91 or 20.36 per cent.

The principal details of the last thirteen cases may be given, in order to complete the former detailed statistical account.

Case 209, aged 48 years; weight of stone, 3½ drachms; dismissed cured 29 days after operation.

Case 210, aged 59 years; weight of stone, 7 drachms; dismissed cured 51 days after operation.

Case 211, aged 64 years; weight of stone, 5 drachms; dismissed cured 73 days after operation.

Case 212, aged 8 years; weight of stone, 4 drachms; dismissed cured 26 days after operation.

Case 213, aged 53 years; weight of stone, 3½ drachms; dismissed cured 51 days after operation.

Case 214, aged 63 years; weight of stone, 1½ ounces; dismissed cured 36 days after operation.

Case 215, aged 65 years; weight of stone, 1 ounce 4½ drachms; dismissed cured 35 days after operation.

Case 216, aged 67 years; weight of stone, 1 ounce; died 11 days after operation.

Case 217, aged 51 years; 5 stones: gross weight, 1 ounce 7 drachms; dismissed cured 27 days after operation.

Case 218, aged 55 years; 2 stones: gross weight, 1 ounce 4½ drachms; dismissed cured 31 days after operation.

Case 219, aged 78 years; weight of stone, (?); died 2 days after operation.

Case 220, aged 63 years; weight of stone, (?); dismissed cured 26 days after operation.

Case 221, aged 70 years; weight of stone, (?); dismissed cured.

The following account of the fatal cases was drawn up and revised by Dr. Keith a considerable time previous to his death, and is given in the state in which it was left by him.]

Notes of Cases of Lithotomy in which Death followed.

As we and others often derive most instruction from our failures, I shall, therefore, briefly give the leading points connected with the fatal cases in my lithotomy experience.

CASE V.—Alexander Allan, aged 74, a farmer, was admitted into the Aberdeen Infirmary on October 24th, 1839, suffering from the usual symptoms of stone in the bladder. A calculus having been detected after he had been in the house for a time, he was operated on, November 20th, and a stone, weighing 1 ounce 3 drachms, and measuring 2 inches by 1 inch by 1½ inches, was removed. He continued quite well, with a pulse not above 80, and urine flowing freely, till late on the evening of the 22nd, when he got out of bed and sat up for two hours. In dancing to show how well he was, the tube escaped from the wound, and the night-nurse, in trying to introduce it, inflicted such injury that fatal inflammation resulted, and he died on the 23rd, three days after the operation. *Post mortem* examination revealed the fact that the nurse had thrust the tube up between the pubes and bladder, allowing urinary infiltration into the abdomen; the man dying from extensive peritonitis, the evidence of which was manifest throughout the abdomen.

CASE XIV.—William Kennedy, aged 4, was admitted on the 8th February, 1842, and operated on the 5th March, when a stone, weighing 1 ounce 1½ drachms, and measuring 1½ inches by 1 inch by 1½ inches, was removed, as was also a second small calculus. He went on well enough till the evening of the 6th, when he complained of pain in his belly. Six leeches were applied over the region of the bladder; and the night-nurse stupidly encouraged the bleeding all night by hot poultices, so that he lost a great quantity of blood. He never rallied from

* We have to acknowledge our indebtedness to Dr. Angus Fraser, of Aberdeen, for the details of Dr. Keith's practice which have previously appeared in the pages of the JOURNAL, and also for the additional particulars which we commence this week. Dr. Fraser collected and arranged the notes of the cases at a time when Dr. Keith's failing health rendered such a task too irksome for his usually energetic mind. Dr. Keith was, however, able to revise part at least of the valuable experiences which we now publish.