kidney being at the same time all but intact, while the other organs of the body were without material flaw. It may be replied that this state of things was only fully known after death. True; and, as already stated, the question of nephrectomy was never entertained in this particular case. But, in a similar one occurring again, would it be altogether impossible to attain to such knowledge, or at least to approximate sufficiently near to it, during the life of the patient? There are two points which, taken together, seem to furnish some guide thereto: 1. The quantity and quality of the urine passed, its density (allowing for adventitious admixture), and the proportion of its proper solid constituents,* especially of the urea.† If we should find that these solid constituents were in fair amount, regard being had to the body-weight and the general condition of the patient, we could not doubt there being good secreting structure somewhere. 2. The degree to which local signs and symptoms incline us to refer the disease to one rather than to both organs. It is needless to observe that, if there were reason to believe that both organs were at all equally involved, the question of nephrectomy could not properly arise; but, in proportion as the lesion seems to be fixed in one kidney, and this seems to be broken down and disabled by it, in the same proportion it must be inferred, from the comparatively normal condition of the urine, that the other is structurally and functionally sound, and equal to the increased strain put upon it. No doubt clinical experience is much in favour of the view that strumous disease started in one kidney extends sooner or later to the other; but we have hardly any experience as yet to tell us how the event might be after a timely removal of the main seat, if not the original source, of disease; while the drying up and obsolescence of caseous deposits are familiar pathological occurrences. Mr. Couper's case (No. 57 in Professor Czerny's list) proves at least the possibility of restoration to health, if Mr. Lucas's (No. 49 *ibid.*) does not also. To sum up, then, it would seem that strumous disease of the kidney should not *per se* and of necessity be a contraindication to the performance of nephrectomy, but that the question of its applicability to any given case should rest for its decision upon other considerations.

REMARKS ON POISONS AS USED BY THE MEDICAL PROFESSION AND ABUSED BY THE PUBLIC.‡

By BLACKALL MARSACK, M.R.C.S.,

Surgeon to the Tunbridge Wells Infirmary; President of the Branch.

THE subject which I have chosen for my short address to you, to-day, is one that concerns the whole of the medical profession, and which, I think, an Association like ours (composed of something approaching ten thousand members) should take into its serious consideration, without further loss of time. It is Poisons, as used by us in our prescriptions, and as abused by the public. Scarcely a week passes but we read of deaths from poisons of what I may call the fashionable type—such as chloral, morphia, chloroform, chlorodyne, etc. And can we be surprised at this, when we consider the matter fairly? Are we not ourselves often to blame? Do we not prescribe chloral and morphia, etc., and put no restriction upon the druggist as to how many times this prescription is to be dispensed by him? The consequence of this is, the patient, feeling the comfort obtained by the drug, continues to take it (often in increased doses), without our sanction, until at last he or she becomes a confirmed *habitué* to this evil; and, like the dram-drinker, cannot or will not do without it.

Another great evil of the present day, is the frequency with which medical men allow their patients to use the hypodermic syringe themselves. This leads to much abuse. Probably five or six drops are ordered to be used for each injection; but, unfortunately, a bottle of the solution is supplied. I have seen a lady, whose body was covered with sores and scars, wherever she was able to use the instrument, from the practice of this wretched habit. I also knew a patient who confessed to having injected, in three operations, as much as fifteen grains of pure morphia in twenty-four hours, which would be sufficient to kill half-a-dozen persons unaccustomed to the drug. So bad has the custom become in some parts of Germany, that the authorities have been compelled to erect institutions for the sole purpose of curing those

who have become habituated to this vice. I have before me an interesting book on this subject, by Dr. Levinstein of Berlin, naming the disease *The Morbid Craving for Morphia*. He says, on page 4: "The originators and propagators of this disease are medical men, who, in cases more or less protracted, have advised the patients themselves to use the injection of morphia." You will also find, in reading this book, how difficult and often dangerous it must be to attempt to cure such cases. The vice, once indulged in to excess, often makes a happy home miserable; and the victim, who becomes accustomed to the poison, lies through thick and thin to the medical men and nurses, and, in the case of a woman, to her husband and friends, and ninety times out of a hundred becomes an habitual spirit-drinker as well: for, when not under the soporific influence of the drug, and dreading for the time the immoderate repetition of the dose, she takes to drink to an alarming extent. Her household duties are neglected; the motherly care of the little ones is confided to the teachings of the nursemaid; and the husband's home is made wretched. Too often the poor fellow is in total ignorance of the true cause; blinded with the idea that his wife is suffering from some obscure malady, for which the doctors have prescribed perfect rest, brandy, varied by champagne, beef-tea, and turtle-soup. How about the day when the truth dawns upon him; and he finds that, after all the expenses of doctors, nurses, sea-side, champagne, turtle, and brandy, that his wife is nothing less than a slave to her own passion—a craving for morphia under the skin? The picture I have drawn is not an exaggerated one. I know of such a case, and doubt not there are medical men here present who have, unhappily, seen similar results from this fearful vice. Lamson's case is one which is most instructive for us all. The vivid description of the effects of the drug on himself should be a lesson to us to do all in our power to prevent this morbid craving; and calls for some strong measures to be placed against the sale of the hypodermic syringe, except to members of our profession. For, I doubt not, there are hundreds and thousands who are constantly in the habit of injecting morphia and other poisons, without the consent of their medical adviser.

Chloral is indulged in to a very great extent; and the drug is imported into this country from Germany by the ton, but is not at present included amongst the poisons in the Poisons' Act. Numerous cases have been recorded of deaths from this medicine; and you will frequently find, in your practice, patients who have been in the constant habit of taking chloral, night after night, for months. Not long since, a young lady was found dead in bed, with no fewer than three empty draught bottles by her side, leaving strong evidence of having contained a full dose of this drug in each. You will perhaps say she wished to destroy herself; but I think it more probable that she was ignorant of the danger, and not getting sleep from the first dose, took the second, and then the third. A drachm-dose has several times proved fatal, and even a less quantity where the heart's action has been feeble. Is not this a medicine which should never be used, except by the authority of the medical practitioner? and ought not some strong measures to be taken to prevent the druggist from supplying the public with this dangerous drug? One fascinating peculiarity of this medicine is, that it seldom produces headache or constipation, and the patient rises in the morning without any fear of detection. When travelling on the Continent last year, I met a lady, who had taken with her from this country a dose for every night that she intended to be away; and I have no doubt that hundreds do the same; or, how could England get rid of the enormous quantity that is yearly imported, considering that it is only used medicinally.

Chloroform is, I think, coming more into disuse by the public, chiefly owing, I presume, to the numerous deaths from its use which have been recorded. Nevertheless, you will frequently find ladies who can produce you the article, at a moment's notice, from their "lock-ups"; and, though it is down in the schedule, they will tell you that they can get an ounce or more from the chemist without any difficulty, and without troubling you for an order. This should not be.

Sulphuric Ether they are not so likely to indulge in, as it stinks too much, and tells its own tale.

Chlorodyne gives headache, constipates the bowels, and acts too much like opium, to become a great favourite. Still, it is the constant companion of many. It ought, in my opinion, to be classified in the schedule as belonging to one of the preparations of opium.

And this leads me to say, that all patent medicines having a soothing effect should be analysed by a public analyst; and those preparations found to contain poisonous properties should be forbidden to be sold to the public, unless authorised by the prescription of a qualified medical man; and I suggest that all such prescriptions should plainly set forth whether the doses or quantities should be repeated, and how often. If repeated, the chemist or dispenser should be bound to make an entry to that effect on the face of the prescription—so that, pre-

* At the time the above was written, I was not aware that Dr. Barlow had already called attention to this point.

† Unfortunately, the process for estimating the amount of urea was not adopted in the case reported; but, as collateral evidence, it deserves notice that the patient bore well the hypodermic injection of morphia in ordinary doses.

‡ Extract from an Address delivered at the Annual Meeting of the South Eastern Branch.

sented elsewhere, if the full quantity have been dispensed, the order or prescription would be null and void. If this should be impossible, I would suggest that only one druggist, in a population of ten thousand, should be licensed to sell poisons of this description; and that his premises and books should be regularly inspected by a Government inspector, like the brewers and beer-shops; that his term of licence should be two or three years, when another druggist in the town should have his turn. This plan should be so arranged as not to interfere with the dispensing of physician's prescriptions.

Another subject, bearing somewhat on the above, demands our attention; and that is, the prevention of the use of arsenic in the manufacture of our wall-papers, dress-fabrics, etc. The common idea is, that the only papers which contain this poison are certain green shades; this is a great error. A case in point came under my notice very recently. Being suspicious that a newly decorated house had something to do with the constant illness of the children I was attending, I had nine pieces of different paper examined, only one of which number contained any green, and I found that seven contained arsenic in large quantities. Now, if these papers be not varnished, what happens is this. The rooms are exposed frequently to the damp atmosphere; then, on a fire being lighted, the heat on the damp walls causes the surface of the paper to pulverise; and you will find, by brushing your coat-sleeve over the surface, that it will be covered with dust containing all the colouring matter of the paper. That this will give rise to irritation of the mucous surfaces of a child's eyes, nose, and throat, I think you will most of you allow. Surely, if decorations cannot be made without the mixture of such a poison, the sooner we go back to the old plan of having our sleeping-rooms and nurseries white-washed, the better. I therefore consider steps should be taken to put a complete stop to this evil, and this, I conceive, should come under the Sanitary Act. Dressmakers have told me that they often suffer for days from sore-throat, and irritation of the eyes and nose, after making up ladies' ball-dresses of bright green gauze. Surely, this should no longer be so; and I do think it is through the members of our profession that this matter should be brought under the notice of the Government. And I consider one of the primary duties of an Association like ours is to point out to our legislators these evils which exist, and help them in framing measures for strengthening any Acts of Parliament which treat on this subject.

ON THE USE OF BELLADONNA IN CERTAIN CASES OF HERNIA.*

By W. SMITH BATTEN, M.R.C.S.Eng., Bromsgrove.

I BRING before your notice a few crude suggestions on the treatment of certain cases of hernia by the administration of belladonna. In the first place I will mention the cases, and then proceed to the physiological action of the drug in question.

The first case is that of an old man, A. B., aged 79, by occupation a postman, remarkably healthy and muscular for his time of life, who had suffered from hernia of the right side for some years. About a week before sending for me, he had been wheeling a heavily laden barrow, when he felt the rupture suddenly give way, causing him great pain. He immediately went into the house and applied hot flannels, etc., which had always given him relief on previous occasions. He continued this treatment for some days, until the woman who nursed him, finding he had had no relief from the bowels since the accident, and that he began to vomit by the mouth what ought to have gone the other way, sent for medical aid. I was called in on the 4th of May, 1878, and tried all the ordinary recognised means for reducing the hernia, which failed, the patient refusing to be placed under chloroform. I gave him two grains of opium pill, and ordered his immediate removal into the Cottage Hospital. On admission, I met my colleagues in consultation, and they decided an operation was the only means of saving life; but one gentleman, having unfortunately shown a piece of cold steel, so alarmed the patient, that with all our persuasion we could not induce him either to take chloroform or to undergo the operation. In this state I found him an hour afterwards, more dead than alive; and the idea then struck me—having only lately heard some very excellent papers on the use of belladonna in obstruction of the bowels and its physiological action thereon—that the drug might be of service in the present case. I therefore ordered the patient half-drachm doses of the tincture, to be taken every half hour. I saw him in two hours' time, when he had taken four doses. The pupils were slightly dilated, and he complained of slight dryness of the throat, but the rupture could not be moved. I

again saw him in an hour; the pupils were largely dilated, and the rupture passed up easily. No vomiting occurred during the administration of the drug. Unfortunately, about two weeks after this, while doing some garden work, contrary to orders, his truss not being properly adjusted, the rupture again came down. Reduction again failed, but three half-drachm doses of the tincture every half hour overcame the difficulty. Having ordered a new truss, the patient has not again required my assistance, and at present is well and in good health.

The second case is that of a baker's assistant, a pale, pasty youth aged 19. I was sent for about half-past two in the morning of March 8th, 1880. He had been suffering from a child from hernia of the right side, and the previous night had been lifting a heavy load of bread, when his rupture came down by the side of his truss. He was placed in a hot bath; taxis was applied and chloroform administered, but to no effect. I immediately gave him scruple doses of tincture of belladonna every hour. In four hours I again saw him; he was entirely under the influence of the drug; the pupils were largely dilated, and he was complaining of dryness of the throat. I tried but failed to reduce the rupture, and being afraid, on account of his youth, to administer more of the drug, told the patient to work at it himself; but he fell asleep, and when I called again in a couple of hours and awakened him, he put his hand down, saying, "It's gone up, sir." I see him constantly, and he has not again been in trouble.

Belladonna, or its active principle, atropia, in small doses, acts on the circulatory system by increasing the frequency of the pulse with rise of the arterial pressure. In large doses, it causes a fall of arterial pressure with the pulse still increasing. Upon the heart itself, atropia acts as a direct depressant poison, though for this end a very large dose of the alkaloid must be administered.

Brown Séquard says positively "that the drug has the power of exciting the muscular fibres of the arterioles." Wharton Jones (in the *Medical Times and Gazette*, 1857, p. 28) announces the fact that, if atropia be dropped upon the web of a frog's foot under the microscope, the vessels can be seen to contract.

Meurot, as the result of his studies on the frog's web, concludes that in the first stages of the poisoning a very slight contraction of the vessels takes place. Wood also says, "the evidence derived from direct observation of the capillaries seems to me to be, on the whole, decidedly in favour of their contraction by minute doses of belladonna, and that the rise of arterial pressure just spoken of, is due to a contraction of small vessels."

Acting upon the abdominal canal, belladonna is a powerful excitant of the contracted muscle. Phillips says that in large doses it produces paralysis in the ganglionic apparatus of the intestinal canal, and possibly in the unstriated muscular fibres themselves. There can be little doubt, however, that the drug acts directly upon the bowel as a stimulant and co-ordinator of muscular action, and thus, secondarily, as a controller of any irregular spasmodic action that may be present.

In conclusion I would say that, though the knowledge of the physiological action of some of our most important drugs on the living human organism is at present in a very crude and undigested state, doubtless from timidity on the part of the medical practitioner to push their action till some decided physiological symptoms are apparent, still I think that, of all drugs, since the discovery of its alkaloid by Mein in 1831, none have called for greater research as to its physiological action and its therapeutic properties than belladonna, and that the action of the drug in the two cases I have mentioned has been to lessen the calibre of the congested vessels of the constricted bowel, and contract the non-striated muscular walls of the protruded gut, and thus to render its reduction into the abdominal cavity more easy.

ANIMAL VACCINATION IN INDIA.—Animal vaccination continues to be carried on in Bombay, Poona, and Kurrachee, a total of 470 heifers having been inoculated last year with successful results in 456 instances. Thirty or forty animals were operated on month by month. The months of August and September show a larger proportion of failures than any other months, while from January to June only one failure is recorded out of 236 operations. In Bombay, animal lymph alone is kept up; in Poona and Kurrachee, both human and animal lymph is in use. The total cost of the animal vaccine arrangements was 2,700 rupees.

SURGEON-MAJOR G. C. CHESNAYE, Indian Medical Service Bengal Establishment, has been appointed Honorary Surgeon to the Viceroy of India, in succession to Surgeon-Major R. W. Cunningham, M.D., deceased.

* Read before the Worcestershire and Herefordshire Branch.