In cases of acute bronchitis with fever, dyspnoea, and failing acidity of urine, Dr. A. Haig recommends bicarbonate of soda to be given in sufficient doses to make the urine alkaline, and states that when this is done the temperature falls, and all the symptoms are quickly relieved. The quantity required is, however, large—20 to 60 grains for a child and 90 to 120 grains for an adult in the twenty-four hours. The remedy must not be given with ammonia, which lessens its neutralizing power, but may be combined with digitalis as a cardiac tonic.

I will not here refer to the action of those special salts of the alkalis—the bromides of sodium, potassium, and ammonium, the lactate, sulphite and hypophosphite of calcium, and other similar combinations whose influence depends not so much upon the base as upon the element with which the base is incorporated—the union creating a new body with very definite therapeutical endowments. These are ordered not for their general action as alkalis but for their specific influence as remedies for the relief of particular complaints. I may, however, refer in conclusion to another use for the bicarbonate of soda which should not be passed over without due recognition. Just as this salt is beneficial in catarrhal conditions of the mucous membrane for its local action, so it is found to have a healing influence when applied to sores and inflamed surfaces of the body as an external application. Alkaline baths are used largely in skin diseases for the relief of irritation; 2 to 10 oz. of the bicarbonate of soda dissolved in an ordinary warm bath has a welcome soothing effect in cases of eczema, psoriasis, urticaria, lichen, and prurigo. The value of the salt as a local application is best seen, however, in the case of ulcerated surfaces and phlegmonous inflammations. A solution of 15 or 20 grains to the ounce of water kept applied to an intractable ulcer will be found to exercise a surprising influence in promoting the healing of the sore. I have seen large superficial ulcers which had resisted all previous measures begin at once to heal under the use of this simple dressing.

In whitlow, after the escape of the pus by incision or otherwise, the bicarbonate of soda solution applied on lint under oiled silk causes the pain and suppuration to disappear with remarkable quickness. It is unnecessary to increase the strength of the solution, for the value of the application does not depend upon any antiseptic action of the salt; indeed, its activity is far greater than that of iodoform or other antiseptic. It is thought that the effect is due to its local influence in raising the alkalinity of the blood, which has been found by Brucker and others to be greatly reduced in cases of febrile reaction set up by bacteriological intoxications. The same treatment is equally useful in cases of burns, scalds, otorrhoea, leucorrhoea, etc., and the value of the solution as a douche to the pharynx in cases of tonsillitis and septic inflammations is recognized by every one. There is one other use for the bicarbonate which should not be omitted: The aching which often comes on suddenly in a decayed tooth from direct irritation of the dental nerve by acid secretions in the mouth can be quickly relieved by washing out the mouth with the solution. The alkali neutralizes the acid and at once puts a stop to the pain.

WE have to congratulate Dr. C. A. Mercier on a somewhat rare honour, the winning of the Swiney Prize. This, so far as the medical profession is concerned, is awarded only once in ten years. The prize itself is a quinquennial award, but goes alternately to members of the legal and medical professions. There is no competition for it, nor do candidates submit their names to the adjudicators. These are the Council of the Society of Arts, and the Royal College of Physicians, who adjudge the prize to whomever in their opinion has made the most valuable contribution to jurisprudence, either medical or legal, during the previous ten years. The prize, which is a sum of 100 guineas and a cup of the same value, was established in 1844 by the late Dr. Swiney, who died in that year, bequeathing £5,000 to the Society of Arts for the purpose indicated. The cup stands about 24 in. high, and is an exceedingly fine piece of silversmith work, the design from which it is quinquennially reproduced having been prepared by the late Mr. David MacIse, R.A. The work of Dr. Mercier, which the adjudicators seem to have had specially in view, was his book entitled *Criminal Responsibility*.

An Address

ON THE

REMEDIAL USE OF ALCOHOL.

DELIVERED BEFORE THE BORDER COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION,

By JAMES MACDONALD, M.A., M.D.,

CARLISLE; PRESIDENT OF THE BRANCH.

IN bringing the subject of alcohol as a remedial agent before your notice a few introductory words of explanation may be offered as to the reasons which have induced me to select this topic for my Presidential address. For the literature with regard to it is generous in quantity; the theme has been worn threadbare by much previous discussion. It is hardly necessary for me to point out to you that for many years alcohol has occupied a prominent place in the medical man's pharmacopoeia. But recently a powerful crusade has been organized against its use, and the leaders in the movement boldly declare that it either possesses no therapeutic efficacy at all, or that its remedial effects could be equally well produced by other drugs. This is the fact that has mainly determined me to take up the subject of alcohol on the present occasion. In the words that I shall have the honour of addressing to you my principal object will be to point out the position of alcohol in the treatment of disease and the uses to which it may safely be applied, where it undoubtedly acts efficaciously, and where its exhibition may be advantageously withheld. In addition I shall endeavour to give some particulars bearing on its later history.

The use of alcohol in the treatment of disease goes back to remote times. Up to a comparatively recent date it was given more or less empirically. With the growth of physiology a scientific element was introduced into the rationale of its administration. A cursory review of the physiological position with regard to alcohol forms, therefore, a natural basis for the present address. What, shortly, is the influence of alcohol in moderate doses upon the heart and blood vessels, the nervous system, and metabolism?

With regard to the precise action of alcohol on cardiac muscle, opinion varies. Drs. Loeb and Bachem in Germany and Dr. R. E. Dixon in this country assert that in small doses it is capable of directly increasing the activity of heart muscle. On the other hand, it is held that this contention has still to be proved.

It is generally agreed that dilatation of superficial blood vessels follows the use of alcohol through the influence of the drug on the vasomotor nerves. In this way the action of the heart is relieved and its efficiency is increased; but when the question of the blood pressure is considered a difference of opinion arises. Physiologists of various countries insist that the pressure is maintained, owing either to a constriction of the vessels in the interior of the body or to an increase in the output from the heart. Other views on this subject of the blood pressure are held by some clinical observers. The medical evidence recently given by Dr. Ralph Stockman before the Whisky Commission has an interesting bearing upon this point. He conducted a series of experiments on himself and on three other medical men with pot-still whisky, patent-still whisky, brandy, and diluted pure alcohols. In the first place, he found that the results produced on the circulation by whisky and brandy were due to their alcoholic contents and not to the residues or distillates—in other words, the action was essentially that of alcohol. Coming to the point under consideration, he stated in evidence that alcohol, taken under conditions of perfect quietude, did not influence the pulse-rate or blood pressure. Under large doses of the drug the blood pressure falls.

Upon the brain and nervous system alcohol does not act as a stimulant. It has, on the other hand, a depressant effect. And it is this sedative, benumbing action of which the physician makes use. "No one," says Schmiedeberg, "will expect any special advantage from a stimulation of the sensations and of the mental functions in disease. We aim rather, as much as possible, at protecting from every form of excitement those areas which are usually in a state of increased sensitiveness, and consequently

keep all strong stimuli arising in the outer world as carefully as possible away from the patient. These efforts are assisted by a mild narcosis which the taking of the wine brings about, even although it be no more than a slight deadening of the hypersensitiveness. Just as rest enlivens and refreshes, so can wine have a like effect by favouring the conditions for rest, although it does not stimulate any function directly."

With regard to the value of alcohol as a food there is a fair consensus of opinion. Graduates of Edinburgh University will recall the interesting lecture of Sir Thomas Fraser on the Life-History of Alcohol in the Human Body. As the result of investigation he found that an average man can consume 1 oz. to 1½ oz. of absolute alcohol in twenty-four hours, according to weight. The products of oxidation did not cause any increase in the amount of carbonic acid or urea excreted, because while still in the body it impaired cell action. On the assumption that it was consumed as food, alcohol has the same value as a carbohydrate of equal weight. Pursuing his experiments upon patients, he observed that in the case of patients on normal diet with steady weight, on the addition of 1 oz. to 1½ oz. of dilute alcohol to the diet the weight was increased; that in patients with a more than sufficient diet and increased weight alcohol increased the weight still further; and that in both of these classes of patients the general health was disordered by the stimulant. On the other hand, he found that when alcohol was given to patients upon a restricted diet with diminished weight, in a few days there was a slight increase in weight, while the general condition was rather better, sleep was secured, and the other functions were satisfactorily maintained. The material point is that the decrease in weight was checked. The conclusions at which Sir Thomas Fraser arrived have been corroborated by subsequent observers. It is hardly necessary to add that alcohol is readily absorbed by the stomach when other nutriment cannot be retained, while it also acts as a stimulant to gastric digestion.

These, then, are the chief physiological data which guide the clinician in the use of alcohol as a remedial agent—the widening of the blood channels with increased flow of blood to the brain and other organs, with a diminished resistance in the peripheral vessels and temporarily increased activity of the circulation, the lethargic action on the brain and the widely admitted fact that alcohol possesses a certain definite value as a food.

Consider, now, in the first instance the use of alcohol in lobar pneumonia. For the past fifty years the treatment of this disease has afforded much material for debate. To-day it is still a vexed question, bristling with points of controversy. On one matter there is agreement—that the present treatment is unsatisfactory. The result is reflected in the figures which tell the story of its fatality. It has been computed that in England and Wales with their population of thirty millions over 220,000 persons are annually attacked by this disease, and that the attendant mortality is 14½ per cent.

If we bear in mind that pneumonia or pneumonic fever is an acute specific infection caused by a germ, the manifest desideratum is an antidotal virus to do for it what serumtherapy has done with happy results for diphtheria. In the absence of a curative serum the remedial treatment is symptomatic. What, then, is the position of alcohol? Assuming that the views of eminent specialists as presented in current medical literature may be taken as fairly indicating the trend of professional opinion, we may advance the general proposition that alcohol, judiciously employed, plays a useful and important part in the treatment of this disease. On the other hand, there is a considerable body of medical men who altogether refuse to admit its efficacy, while there still remain a few practitioners with whom it is an article of faith to treat all cases of this kind with copious libations of brandy; but they are a decadent minority.

The points to which the physician looks for guidance in its use are the state of the heart, especially with regard to the onset of over-distension of its right side, with the small, rapid, feeble, and irregular pulse, the embarrassed breathing, the facial pallor, and the other symptoms of what has aptly been described as "right-heart misery." The presence of rigid vessels is also an indication for its use, as well as the occurrence of delirium.

With some practitioners it is the custom to withhold alcohol until the pulse begins to flag, while others would apply it judiciously throughout. It is the cardinal rule of the many to employ free stimulation with alcohol in increasing doses towards the crisis. Administered on these lines, it is regarded as a valuable and necessary aid to such other stimulants as strychnine, digitalis, and oxygen.

Dr. A. O. Affleck of Edinburgh has recently made an important contribution on this subject. He points out that the same value does not attach to the use of alcohol as a heart supporter as formerly; for most cases it is believed by many to be unnecessary, and that even in the case of the aged and feeble its employment in any but small amount may be harmful. While Dr. Affleck is far from denying it a place in the therapeutics of pneumonia, he believes it to be inferior to strychnine for the heart, a drug which he thinks might often be given with good effect early in the disease.

The views expressed by Dr. Affleck form a link, as it were, with the body of medical opinion which sees no advantage in the employment of alcohol, and is entirely opposed to its use in the treatment of disease. The practitioners of this school are largely identified with the work of temperance reform. The London Temperance Hospital may be looked on as the mouthpiece of the movement. Instituted in 1874 as a protest against the excessive use of alcohol which was then the practice, it has grown in importance, both as regards the scope of its work and the number of its patients. The object for which it exists is to discourage the employment of alcohol and to furnish trustworthy evidence of the results of its disuse. In 1906, with over 1,200 patients on the register, alcohol in the form of rectified spirits of wine was given in four cases, all of which were fatal. Last year (1907) there were about 70 cases of pneumonia under treatment. The medical staff claim that the results they obtain without alcohol compare favourably with those of other hospitals. Whether that be so or not, the unwisdom of forming a broad generalization from a comparatively limited number of cases is obvious. And, besides, in a disease like pneumonia there are many contributory factors and side-elements which have to be taken into consideration. The experience of this hospital only serves to show what is generally recognized, that the majority of these cases get well without alcohol. It does not affect the issue in favour of its utility in certain contingencies. I daresay many of you can recall instances where the timely use of alcohol at a critical juncture has turned the scale when life was trembling in the balance. After all, an ounce of practice is worth a pound of theory.

Let me now direct attention to the use of alcohol in the eruptive and continued fevers and submit to you a few impressions drawn from my experience at the Carlisle Fever Hospital.

It is commonly agreed that as a rule, under normal conditions, young children, who form the large majority of these cases, go through the eruptive fevers without the aid of alcohol or any other drug. But there are exceptions. There is, for example, the occurrence of pneumonia in scarlet fever, associated with nephritis, or with gangrenous sore throat—the so-called deglutition pneumonia—or, again, the pneumonia arising independently of these sources. These are all conditions of true croupous pneumonia. For the renal form of the disease there is a direct drawback to the exhibition of alcohol, but in the deglutition pneumonia and in septic conditions generally the use of alcohol has proved of service.

Again, in the treatment of diphtheria in children alcohol has a place. It is useful as an aid to strychnine in the grave attacks of syncope which from time to time occur in that disease with startling suddenness. Repeated vomiting, also, is an obstinate symptom to cope with, especially when associated with a septic state, quick, irregular, or intermittent pulse and albuminuria, indicating severe intoxication. In such conditions, when peptonized food and nutrient enemata have failed, iced brandy has alone been retained by the stomach. Nourished on alcohol in this way, for several days patients have been tided over a critical period and put in the way of ultimate recovery.

To say that many cases of typhoid fever do not need alcohol is a loose way of stating that the disease frequently

runs a mild, uncomplicated course. Alcohol, however, is never given in the local hospital as a matter of routine, and its employment is subject to periodic revision. A frequent low tension pulse with dicrotism, a sustained high temperature with muttering delirium, marked tremor, and septic conditions, these are the symptoms which distinctively call for its use, and which have been found to be relieved by its administration.

A cognate question may arise as to the proper course to adopt in the case of persons suffering from this disease who have been used to taking alcohol habitually to excess. Ought they to be put upon stimulant as soon as they come under treatment on the ground that they are supposed to be dependent upon it, or should alcohol be withheld until the special indications for its employment are apparent? Professional opinion upon this point is variable. Two cases that recently came under my observation at the hospital are of interest in this connexion. The salient points are these. The patients, a man and a woman of middle age, living about four miles from the hospital, were intimated to the local authority in the third week of their illness to have typhoid fever. The man had already had several attacks of intestinal hæmorrhage. To remove patients such a distance, at a critical stage of their illness and under these special conditions, was palpably to contravene the primary canons of precaution in this disease. But in point of home surroundings the state of affairs was most unfavourable. Extraordinary circumstances justify exceptional measures, and as Hudibras says:

For when your case can be no worse
The desperatist's the wisest course.

To say that these persons had been for years addicted to the inordinate use of alcohol is a euphemistic way of stating a plain but pathetic fact. After admission to hospital the cases ran a protracted course of some severity—the man continued to have hæmorrhages for some weeks, the woman suffered from a suppurative otitis media, one of the rarer incidents in this fever. Neither patient, however, presented in a marked degree the special indications for the employment of alcohol, and it was accordingly withheld throughout their illness, which ended in recovery.

The experience of these cases gives a measure of support to the view that the mere history of previous excess is no reason for the immediate exhibition of alcohol. (A series of charts was then exhibited.)

Typhus fever has only an academic interest for the general practitioner. His chief concern and trouble are with the diagnosis. The views of Murchison on the use of alcohol in this disease hold in the main to-day. Patients under 20 years of age do best, as a rule, without it; most patients over 40 are benefited by it from the commencement of the second week, while persons of intemperate habits require alcohol earlier and in greater quantity than others. Typhus, in sharp contrast to typhoid fever, runs a swift, short, definite course, with a crisis like pneumonia. In the sleeplessness and delirium characteristic of this disease, the benumbing effects of alcohol are utilized with benefit. The "perpetual moan" of these patients is turned to "dreamful ease" under the soothing influence of good whisky and paraldehyde.

The use of alcohol in lobar pneumonia and typhoid fever have been considered in some detail because these diseases are the classic battleground on which the alcohol controversy has been so often waged. Other maladies or conditions will occur to you in which experience has proved the utility of alcohol. As a sedative, for example, in certain nervous ailments, as the modest but serviceable nightcap in the sleeplessness of old people, or as a dietetic in the convalescence from acute diseases, whether it is taken in the form of beer or stout, or the "mellow-tasted burgundy."

On the other hand, there are states in which the use of alcohol ought to be discouraged. It is barred in acute forms of renal disease. In neurotic conditions associated with feelings of depression, where it is taken for the temporary but agreeable relief it affords, it is best withheld. Necessary as it is at all times to bear in mind the insidious qualities of alcohol and the remote pathological effects of its abuse, a special warning must be uttered in dealing with diseases peculiar to women, in view of the fact that of late years there is evidence to show that female intemperance is on the increase.

And now with regard to the administration of alcohol. The admission must be made that even to-day alcohol is frequently given in a haphazard fashion and as a matter of routine. Too often it is allowed merely in deference to the wishes or entreaties of patients or their relatives, who have views of their own on the subject which they are not as a rule slow to impart to the medical attendant. A recent charge of malpraxis has an interesting bearing on this statement, where it was alleged by the prosecution that the lax or wrongful employment of alcohol by a medical practitioner hastened the death of a patient. But if alcohol is to keep its place as a therapeutic agent it must be administered on rational lines. The same scientific precision must safeguard its use as in the case with other powerful drugs, such as strychnine or opium. As with these, so with alcoholic stimulants, a fixed standard of purity must be secured. With regard to whisky, for example, which has lately fallen from favour as a stimulant in disease, owing to the uncertainty of the results which attend its analysis, it is generally admitted that spirit of this kind should be kept in bond for an age-limit of at least two or three years before it is taken out for consumption. Brandy is perhaps more largely prescribed, partly because of its recognized purity, and partly because it has a place in the *British Pharmacopoeia*.

But in whatever form alcohol is applied the dosage must be definite—6 oz. to 9 oz. being a reasonable daily range for an adult—its employment must be subject to frequent revision, and it must be at once withdrawn when the object for which it was given is attained.

In the history of therapeutics there is nothing more striking than the remarkable modification that has come over medical opinion during the past thirty or forty years with regard to the remedial use of alcohol. About the middle of last century Allison, Graves, Stokes, and Todd advocated the liberal employment of stimulants in fevers. They based their teaching on the theory that alcohol was an article of food. By their personal magnetism they dominated with their views the rank and file of the profession. And alcohol was given with a prodigal hand. Stokes tells of a patient that "brandy was freely administered to him, and omitted only when the patient showed symptoms of its disagreeing with his brain," a delicate way, surely, of depicting a condition which in those days of large doses must have been far from uncommon. In the case of a year-old child with pneumonia Anstie gave 6 oz. of wine daily and nothing else for twelve days; 24 oz. of brandy with no other sustenance for similar periods of ten days was a customary incident in the case of adults. Bentley Todd gave a girl with typhoid fever and pneumonia 48 oz. of alcohol in twenty-four hours.

The fashion in colossal doses had its day, and a new era of reaction has taken its place. In this connexion Sir Victor Horsley has compiled a set of official facts and figures which bring into sharp relief the altered attitude of medical men with regard to this question. I will not burden you with statistics, but I will try to put the substance of his tables before you in an easily digested form. An analysis of the money spent upon alcohol and milk by several London hospitals was made, giving the returns for one year in each decade from 1862 to 1902. In 1862 the cost of alcohol per bed was £3 8s.; in 1902 it was £1 5s. The cost of milk per bed in 1862 was £1 6s.; in 1902 it was £3 18s. So it appears that in point of consumption milk and alcohol have changed places. In the case of the Metropolitan Asylums Board the cost of stimulants fell from 1s. 4.7d. per head in 1894 to 4.5d. in 1905. These results are supported by the returns from local institutions. At the Cumberland Infirmary, Carlisle, the average annual cost for alcohol and malt liquors during the past ten years works out as follows: Alcohol, 11.5d. per head; malt liquors, 0.6d. per head, or about 1s. in all. During the last three years, 1905-7, the figures per head are: Alcohol, 5.2d.; malt liquors, 0.4d.; total, 5½d. Alcohol does not enter largely into the treatment of the insane, but the statistics furnished by the Cumberland and Westmorland Lunatic Asylum virtually repeat the above experience. From 1862 to 1906 the average cost per head for wines, spirits, and porter was 1½d. Up to 1900 the cost was always above 1d., in 1875 touching 3½d. Since then it has kept below 1d., almost reaching the vanishing point in 1906, when the cost per head stood at 1⁄16 of a penny.

In commenting generally upon these returns, it will be noticed that they contain no information of the results of treatment. That is an important omission. And, again, the greatly increased consumption of milk in our various hospitals raises a pertinent question: What precautions are the managers of these institutions taking to safeguard the purity of the milk service? It is well known to you that the dangers associated with milk in the way of conveying disease, are many and serious. Existing legislation on the subject is notably defective, while it is common knowledge that the hygienic regulations which are in force are inadequately administered by many sanitary authorities.

Broadly stated, then, it is obvious from the figures which have been quoted, that medical opinion has markedly changed, and there is a fear that following the tendency of reaction, the swing of the pendulum may go to the opposite extreme.

What are the factors that have operated to produce this result? There are, of course, habits or fashions in therapeutics as in everything else. Fashions in the past have sometimes been regulated by the prevailing theory of the origin of disease. In the days, for example, when diseases were set down to inflammation, bloodletting was all the vogue, and the use of alcohol was looked on as a perilous enormity. Then came the period when our bodily ills were ascribed to lowered vitality, and stimulants were administered to therapeutic excess. At the present day the bacterial origin of disease does not materially affect the employment of alcohol, which is generally given with judgement and discretion on the lines which have been indicated.

A consideration of the influences which have tended to lessen the use of alcohol would be incomplete without a reference to the work of the medical advocates of temperance reform. Temperance propagandism, from a professional standpoint began about the end of the eighteenth century. With a Scotsman, not inappropriately, rests the distinction of inaugurating the movement, for a certain Dr. Trotter of Edinburgh, it appears, wrote a treatise on the effects of drunkenness on the human body, which was published in 1804. From that time onwards the history of the agitation has been one of progress. Simultaneously, with the wave of temperance that has flowed over the country in recent years it has taken on fresh activities, and at the present day a group of eminent medical specialists are conducting a vigorous campaign against alcohol.

Every one must admire the unselfishness of their devotion to a crusade which makes for the solution of a grave social problem. The mental and physical deterioration wrought by the abuse of alcohol are evils with which we, as medical men, are only too familiar. But these reformers go further. With much strength of language and on every occasion—in the press, on the platform, and in book publications—they roundly assert that as a food alcohol is useless and as a remedy it is harmful and unnecessary. The profession, it seems, has changed its views on the subject, and in a tone of finality we are told that in the matter of alcohol we are on the high road to therapeutic nihilism. Referring to the hospital statistics which have been cited, they argue that if to the economies effected by the restricted use of stimulants were added the elimination of cases which were due to drink, the thorny task of hospital finance would be solved for ever. With a sublime confidence in the future they base their visionary forecast on the modest assumption of creating a sober nation.

The danger of establishing the habit of inebriety by the remedial use of alcohol is a matter of grave concern to the apostles of temperance reform. They have equipped a hospital to deal with this evil. The distinctive principle of the London Temperance Hospital is to guard patients from the perils that beset them in this way. That exceptional cases do occur which may be put down to this cause is freely admitted. The question, however, is a complex one. It is difficult to collect anything like accurate information on the subject. We know how ready the public are when anything goes wrong to lay the blame upon the doctor. Looking back over the past twenty-five years, I cannot help thinking that this danger has been greatly exaggerated. By caution and discrimination the element of risk should be largely corrected, and, in any

case, the good of the greatest number is the first consideration which overshadows everything.

A favourite device with the opponents of alcohol is to refer to it invariably as a poison. The motive is obvious. In the course of a discussion on this subject which took place in the House of Commons under the late Government, professional opinion was quoted in favour of this view. Speaking to the question, the Lord Advocate said, "As for the medical evidence, we must be driven to the conclusion that in this case as in others doctors differ. When we hear it stated that alcohol is a poison, I wonder if honourable members are aware that the Majority Report of the Royal Commission contained these words: 'We must recognize the fact that most people still regard alcohol as an ordinary article of diet which is only harmful if taken to excess.'" And he concluded: "It is idle to say that alcohol is a poison and nothing more, and that the use of it is inconsistent with any work demanding acute and alert judgement."

A suggestion coming from a society called the International Union of Medical Abstainers was put forth some time ago in the *BRITISH MEDICAL JOURNAL*. It was to the effect that an inquiry be made as to the value of alcohol in lobar pneumonia and typhoid fever, and the International Union has invited the staffs of hospitals in various countries where it is represented to co-operate in the work. The idea is to treat all cases of these diseases alternately with and without alcohol. Apart from the humanitarian aspect of the proposal, I wonder whether, if a member of this union were seriously ill, he would adhere to his guiding principles—if he would remain faithful to his dogma? From a speculative point of view it is an interesting question. It is whispered that a well-known doctor—a professed advocate of total abstinence—was in the habit of taking champagne when his energies were flagging. They often flagged.

Early last year a noteworthy pronouncement on the use of alcohol—strongly traversing the views of medical reformers—appeared in the *Lancet*. It was drawn up by a group of well-known medical experts who, recognizing that in the employment of alcohol the needs of the patient must be the first consideration of the professional man, expressed the opinion so long and generally held that in disease alcohol is a rapid and trustworthy restorative. And the signatories further hold that in many cases it may be truly described as life-saving, owing to its power to sustain cardiac and nervous energy whilst protecting the wasting nitrogenous tissues.

The manifesto discharges a kindly service as a protest against the uncompromising opposition of a body of extremists to the rational use of alcohol. It does more. It applies a spur to the indifference displayed by many medical men with regard to an eminently practical question. It is true that on minor points a divergence of opinion exists, but on fundamental principles there is common agreement. In the past the instruction given in our medical schools on this many-sided question was scanty and inefficient. It is doubtful if the student of to-day is as thoroughly impressed with its importance as he ought to be. If the subject were taught in a sound and systematic manner, the young practitioner would be better fitted to form a judgement on one of the difficult problems that confront him on the threshold of his career. But he would still do well to bring to its solution a broadminded spirit of tolerance and moderation.

To recapitulate, in the foregoing remarks I have endeavoured to trace the position of alcohol as a therapeutic agent. I have shown how in this matter the attitude of the profession has undergone a marked change. A system of excessive dosage has given way to caution and conservatism in its exhibition, and the reactionary tendency to go to the opposite extreme has been indicated. Alcohol is a drug, and as such must be administered with the same precision and discrimination which we employ in prescribing other powerful drugs. Given with these precautions, alcohol is an invaluable remedy in the treatment of disease.

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