These powers would include granting a representative to any corporation (for example, Dentists' Association). Enacting laws and regulations for the corporations (aiming at uniformity). Making regulations as to course of study, method of examination, etc. Conducting or supervising examinations of corporations. Demanding inquiry by corporations as to conduct of their graduates or licentiates. Discipline over students and practitioners for unbecoming conduct, etc. (by means of bond and declaration signed previous to registration). Compelling registration simultaneously with qualification and making these concurrent. (Precedent—Dentists Act, 1878, Clauses xiii and xiv.) Disregistration and restoration to *Register*. Cancelling of licence or degree and restoration of same. Suspension of licence or degree or from *Register*. Raising or altering fees for registration (annual or compounding). Conducting inquiry by means of judicial committee. Prosecution of unqualified persons practising in medicine, surgery, or midwifery, or any branch thereof. Prosecution of employers of such (practitioners having unqualified deputy). Prosecution of persons allowing employment of such (managers or companies allowing doctors to employ an unqualified deputy to do the work). Right to penalties recovered in London. It is also desirable that all premises used for or in the practice of medicine, surgery, or midwifery should bear the name of the person so practising, exposed to public view. And that no institution, whether wholly supported by voluntary contributions or not, shall be allowed to employ an unqualified person as medical officer, surgeon, etc.

III.—THE POWERS OF THE CORPORATIONS AND UNIVERSITIES.

These would require powers of discipline over graduates or diplomates (by means of bond and declaration signed previous to registration, and by granting diplomas to be held conditional to observance of by-laws and regulations). Cancelling, withdrawing, suspending, and restoring a diploma or degree. Raising or altering fees for examination or registration.

IV.—PRACTICE BY UNREGISTERED PERSONS.

There are many ways of checking irregular practice. As precedents to our proposals we have, with regard to unqualified practitioners, the Solicitors Act, 1843, Sec. ii and xxxii; the Apothecaries Act, 1875, Sec. xiv and xx (as to assistant, Sec. xvii); with regard to assumption of titles or descriptions, the Dentists Act, 1878, Clause iii; the Veterinary Act, 1881, Clause xvii, Sec. i. We suggest therefore a penalty for the practice, direct or indirect, of medicine, surgery, or midwifery, or any branch of either of them, for or in expectation of gain or profit.—(Mr. Whitehead's resolution.) A penalty for assumption of titles or descriptions implying qualification or even skill necessary for the practice of medicine, surgery, or midwifery, or any branch of either of them, or administration of medical treatment. (JOURNAL Bill, January 12th, 1895, Dentists and Veterinary Acts.) We also propose a penalty for the employment of an unqualified deputy (in cases of public appointments, mines, works, etc., which are contracted for at a low fee and worked by unqualified assistants). A penalty for allowing employment of unqualified deputy (affecting managers or companies or owners of mines, etc.). Right of action for damages (tort), if cause for such, when a person is attended by an unqualified practitioner, any contract to the contrary notwithstanding, that is, without the unqualified person having the power to bind a patient not to prosecute him. Right of action by representatives, if cause for such, when a person dies, having been treated by an unqualified practitioner, any contract to the contrary notwithstanding. Criminal proceedings for injury or death caused by unqualified practitioner. Right to public to recover fees paid to unqualified practitioners. Fine of costs in cases of inquests caused by attendance of unqualified practitioner. And that any person using the name of a duly qualified practitioner with regard to any appliance or proprietary medicine shall on demand show evidence of his having received authority to do so, and if he cannot he shall be liable to an action for damages by any duly qualified practitioner bearing the same surname as that used.

V.—MEDICAL ADVERTISEMENTS.

The Indecent Advertisement Act applies only to London

and such cities as have adopted it—for example, Liverpool. It only makes the posting up to public view or the delivery of pamphlets, pictures, or advertisements of that character penal, and does not apply to advertisements in the news papers, nor, it seems, to those on sandwich boards or sent through the post. This requires making the London Act refer also to newspapers and sandwich boards, etc.; extending it to the United Kingdom; including within its scope advertisements suggesting the procurement of abortion—"removal of obstinate irregularity," etc.

VI.—CERTIFICATION AND REGISTRATION OF DEATHS.

At present the registrar, an unqualified person, is the judge as to whether there are suspicious circumstances about a death or not. Unregistered persons may notify a death, and their notification is accepted.—(Herbalist.) Certification of the fact of death and identification of the body are not necessary. Fraud by personation of living by dead, obtaining certificate by false information, or forging certificate is easy. The medical practitioner gets no fee for the certificate of death, while the registrar is paid for copies of it. The practitioner is not bound to certify that he attended deceased in the last illness. There is no definition of "attendance during last illness," nor rule as to when a certificate must be given and when not. A very large proportion of stillbirths are uncertified, or certified by unqualified persons (midwives and others); 45 per cent. in Manchester are so certified. Stillborn children need not be buried in a public burial ground, and if not, neither the birth, death, nor burial need be registered.

Following the recommendations of the Special Commission appointed to inquire into this subject—at least in their main lines—we propose: That all uncertified deaths be compulsorily reported to the coroner; that no certificate issued by an unqualified person be accepted; that the fact of death be certified and the body identified; that certificates of death and all copies thereof be got directly from the practitioner; that there be a fee for each certificate or copy; that grounds should be defined for refusing certificates; that "attendance during last illness" should be defined; that stillbirths should be registered and certified the same as ordinary deaths.

Gentlemen, we, as registered medical practitioners, have a recognised legal status. That the benefits accruing from this are so insignificant is, in my opinion, largely due to the apathy and want of cohesion in the profession. The proposals which I have submitted to you are already considered Utopian by some, and no doubt will be by others, as are most schemes of a comprehensive nature when first put forward. These proposals are not original; they have nearly all been advocated by others before, but are now brought together as a whole. We must remember that in advocating provisions which shall be of advantage to our profession, if we are to hope for some measure of success, they must be blended with others which are directly of advantage to the public; this is most clearly shown in the provisions for suppression of practice by unregistered persons. To my mind there is nothing either impracticable or unreasonable in any of our proposals, and Dr. Gledhill, barrister-at-law, to whom I am indebted for the information contained in this paper, has undertaken to show the necessity or advisability of any one of them.

A FURTHER ANALYSIS OF THE WATER OF THE ZEMZEM WELL IN MECCA.

BY

E. H. HANKIN, AND DR. BAPUJI P. GADIALLY,

M.A.,
Fellow of St. John's College, Cambridge; Chemical Examiner and Bacteriologist to the North-West Provinces and Oudh, and to the Central Provinces.

L.M.S.,
Assistant to the Chemical Examiner.

[From the Government Laboratory, Agra, India.]

We owe to the kindness of Mr. Ernest Hart the opportunity of making a fuller examination of Zemzem water than that reported by one of us in the BRITISH MEDICAL JOURNAL of June 30th, 1894, p. 1412.

The specimen of water in question was brought from Mecca in the year 1894 by Haji Abdush Shukur. The quantity was about 500 cubic centimetres. The results of analysis are shown in the following table, together with the analyses of water from three other sources for comparison:

Source of Water.	Total Solids, Grains per Gallon.	Chlorine, Grains per Gallon.	Total Hardness, Grains per Gallon.	Fixed Hardness, Grains per Gallon.	N. as Nitrates, Parts per Million.	N. as Nitrites, Parts per Million.	Free Ammonia, Parts per Million.	Fixed Ammonia, Parts per Million.	Sediment.
Zemzem Water, from Surgeon-Major Rankin ...	259.0	51.24	—	—	—	—	0.93	0.45	Scanty sediment.
Zemzem Water, from Mr. Ernest Hart ...	350.0	77.00	—	—	0.4301	0.0304	0.64	0.24	Very slight.
Water from Jacob's Koti Agra ...	33.6	1.40	4.9	2.8	—	—	0.08	0.07	None.
Agra Municipal Water	12.6	2.24	5.6	2.8	—	—	0.00	0.04	None.

It is almost superfluous to point out that each one of the results contained in the above table indicate that the water from the Zemzem well must be subject to a large amount of contamination.

The water was also subjected to a qualitative bacteriological examination. A "vibrio," or "comma bacillus," and a microbe resembling the *B. coli communis* in every respect, except that it did not give the indol reaction, were isolated. The "vibrio" exhibited the ordinary characters of the group when cultivated on different media. It differed from a typical cholera microbe (if the term typical may be ascribed to so variable a microbe as that of cholera) in that it was harmless to guinea-pigs when injected into the peritoneum, and it only gave the indol reaction faintly in a ten-day-old culture and not at all in fresh cultures.

In several cholera epidemics in different parts of these provinces we have found that the cholera microbe was almost universally present in well water at the time of the outbreak, that a short time after the outbreak it was still present, but showing various cultural characters that may be taken as signs of degeneration, and that at a later period (two or three months) it had completely vanished except in a few exceptional instances. Consequently it appears that the finding of a vibrio in water is a sign that it has been exposed to human contamination, and that it may have been concerned in the production of cholera. That the vibrio we met with in the Mecca water had such significance we could not at once conclude, for the water appears to have been brought from Mecca in a vessel that was not hermetically sealed, and had been decanted into a bottle before being sent to this laboratory. We owe our thanks to Surgeon-Major Roberts, of Aligarh, who sent us a further specimen of Zemzem water which reached us within two months of its collection. This water was contained in a hermetically sealed tin vessel known as a "dibia." There was therefore in this case no chance of further contamination after the water left Mecca. In this water we discovered a vibrio which appeared to be a little less attenuated than the other, for its three-day-old cultures gave the indol reaction, and it killed a guinea-pig in thirty hours.

We have applied to the Zemzem water what we believe to be a new method of estimating its fitness for drinking purposes. We have tested its capacity of acting as a culture medium for the cholera microbe. It is, we think, obvious that the presence of not living organic matter in water is objectionable not only because it may be evidence of sewage contamination, but also because it may act as food for microbes. It would seem probable that in the latter respect a direct experiment would give more reliable results than a chemical analysis. The adjoining chart contains the result of our experiment in a graphic form. Three specimens of water were used in this experiment; one, as already mentioned, was the Zemzem water; the second was water from a well in Agra known as Jacob's Koti; the third was the Agra municipal water. Ten cubic centimetres of each kind

of water were put into test tubes and sterilised in an autoclave. They were then inoculated with cholera microbes that had been cultivated for some days previously in very dilute peptone solutions. Immediately after the addition a test was made to see how many cholera microbes were present in a cubic centimetre of each of the specimens of water. At intervals other similar tests were carried out. The results are shown in the chart. It will be seen that (1) in Agra municipal water the cholera microbe nearly or completely dies out within two days, (2) that in Zemzem water on the other hand the cholera microbe reproduces vigorously. At first a slight diminution in numbers took place, but after this the microbe reproduced with facility. (3) In the Jacob's Koti water a similar reproduction of the microbe occurred.

If the above experiment can be taken as representing a natural occurrence, it may be expected that the cholera microbe would produce far more serious effects if it got into the Zemzem well than if it got into Agra pipe water. The latter water is derived from the Jumna, and is subjected to Anderson's purifying process before it passes into the pipes. Other experiments have shown us that probably the bactericidal action of Agra pipe water is also possessed to some extent by the original Jumna water, from which it is prepared. Control cultures were made, and proved that we had to deal with a pure culture of the cholera microbe in the above experiment.

A noteworthy fact may be seen from an examination of the appended curve, namely, that no definite relation exists between the chemical composition of the different specimens of water and their power of nourishing the cholera microbe. On comparing the data for the Zemzem water with those for the Jacob's Koti water, it is seen that the water that is better chemically is the better food medium for the cholera microbe. Further, the comparatively slight difference chemically between the Jacob's Koti water and the Agra pipe water gives no indication of the difference in their powers of nourishing the cholera microbe. It is conceivable that the application of this test on a larger scale might lead to an explanation of certain cases of "local immunity" against cholera.

A PROTEST AGAINST OVER-TREATMENT IN ECZEMA.

By MALCOLM MORRIS, F.R.C.S. Ed.,

Surgeon to the Skin Department, St. Mary's Hospital.

THERE is no general formula for the treatment of eczema, and, to use a famous phrase, no one—not even the youngest among us—is infallible in his methods of dealing with it. Here, however, as in the case of other diseases, he will be most successful who tries to see things as they really are, and not in the light of any preconceived theory. Of the clinical facts of eczema we probably know nearly all that is to be known; of the laws which govern the evolution of the process we know something; of the pathological force which sets it in motion we know little or nothing. But if little is known a great deal has been imagined, and the subject has been enveloped in an atmosphere of hypothesis which in practice too often darkens counsel. The notion is still somewhat widely prevalent that eczema is the expression of a definite constitutional "dyscrasia," or in the language of the old pathology (from which the professional mind has not even yet altogether shaken itself free) the outward and visible sign of an inward "peccant humour" of some kind. This superstition, for it is nothing else—leads to errors in the treatment of the disease in two opposite directions—on the one hand of doing too little; on the other, of doing too much. Some, believing that the skin lesions act as "issues" whereby the supposed mischievous principle is withdrawn from the system, leave them untreated in the fear that the healing of them might cause "morbid determinations" to internal organs—a fear for which, according to my experience, there is simply no foundation. Others direct all their therapeutic efforts to forcing on what they call a "crisis," their plan of campaign apparently being to drive the enemy into the open country where he can (in theory) be crushed without difficulty. It is, naturally enough, at hydropathic institutions

that this method is most in favour, for there "critical eruptions" are among the usual incidents of the treatment, and therefore easily come to be looked upon as being an essential element in the cure. There is something seductive in the notion of bringing the disease to the surface, and there dealing with it in a summary fashion, but unfortunately the plan does not answer in practice. It is much easier to fan the flame of eczema than to subdue it. The "critical eruption" is very apt to forget that it is merely a strategical manoeuvre, and to behave exactly as if it were a natural exacerbation of the disease; like a foreign power called in as an ally it sometimes remains as a conqueror, more oppressive and more difficult to get rid of than the original enemy.

I have seen so many cases of eczema made worse by misdirected therapeutic energy that I think it my duty, for the credit of the profession as well as in the interests of patients, to say a few words of warning on the subject. The importance of avoiding this error has quite recently been impressed on my mind by the following case which I relate as a typical example of the evils of over-treatment in eczema. I give it as far as possible in the words of the patient, who is of intelligence and position:

On January 9th I consulted a doctor at the request of my friends, and told him of my complaint, which up to that time had been pronounced as gout coming out. The doctor told me I was suffering from eczema in an acute form, and put me on a diet and treatment. This, however, did not seem to be the correct treatment, for I grew rapidly worse and took to my bed. On March 9th I went on leave to my father's house, and there saw the family doctor, who at once recommended a course of hydropathic treatment. I went to a well-known hydropathic establishment on March 24th, being only then fit for travelling. I was on arrival put to baths and massage in all its forms. At 7 A.M. I had a glass of hot water, followed by a Russian bath at 7.30. At 10 A.M. I saw the doctor, and then had a sitz bath of oatmeal and boracic acid at 70° F. At 3 P.M. I had a cool pack to make me perspire freely, and then was at once given an oil enema. At 8 P.M. I had a series of bandages put on: (1) To the spine, between shoulders (bread and chille); (2) to the abdomen, to produce a crisis (bread); (3) to the anus, the part affected, to soothe (bread and boracic). If the irritation became intense at night I was to apply a solution of cocaine and water; if this was useless to use a solution of coal tar and olive oil. For insertion into the anus a suppository of cocaine, cocoa butter, and oil of olives. On these remedies I continued, with restricted diet—only fish and chicken, oat flour, hot water and dry toast, mutton once a day (meals three only)—till May 4th. My eczema when I went to the hydropathic institution consisted of an intertrigo at the anus and round the testicles slightly. When I left on May 4th I had a broad band on the abdomen, highly irritable and suppurating readily; the patch on the testicles had spread down along each leg; the patch round the anus had spread from the hips to a plentiful covering of each buttock. I could not sit or walk, and was forced to sleep in a standing posture, leaning my shoulders against the walls or balancing my legs and shoulders on to armchairs, with a support for the hollow in the back.

There is nothing remarkable about the case here recorded, but it serves to point a moral. A localised eczema had been aggravated by over-treatment till it was on the way to become general; the bread poultice intensified the inflammatory process and the bandages acted as vehicles for the conveyance of inoculable material to the parts to which they were applied. The dietetic restrictions helped to lower the patient's strength without having any beneficial effect on the disease. The plan of treatment, in fact, was founded on an erroneous notion as to the nature of the disease. It cannot be too strongly insisted upon that though some constitutional disorder, such as gout or diabetes, is sometimes associated with eczema and may indirectly react on the skin affection by its effect on the patient's health, eczema in itself is essentially a local catarrh, and as such should be treated by local remedies. Even in the use of these the practitioner should be guided by the spirit of Talleyrand's maxim: *Surtout, Messieurs, pas trop de zèle.*

Too much zeal in the use of strong remedies which cause irritation is more disastrous than the do-nothing policy of those who look upon eczema as a useful derivative. My own method of treating the disease has been fully described elsewhere, it need only be stated here that I trust mainly to local applications of antiparasitic substances, feeling my way with the greatest caution so as to destroy the agents which are causing the mischief without setting up additional inflammation. Constitutional treatment is employed only when there is a definite indication that it is required.

THE Gaskell Medal and Prize in Mental and Nervous Diseases has been awarded, after examination at the Royal Bethlem Hospital, to George W. F. Macnaughton, M.B., C.M. Edin.