# PRESIDENTIAL ADDRESS
ON
# THE DERMATOLOGY OF TO-DAY.

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AFTER some introductory remarks Mr. Malcolm Morris proceeded as follows:

I propose to pass rapidly in review before you the principal advances recently made by labourers in the dermatological vineyard which, if comparatively small, is not one of the least fruitful corners of the field of medicine. In no sphere of human activity is the old order passing away and giving place to the new more conspicuously than in medicine. In this general advance of the healing art dermatology has not lagged behind. No one comparing the position of that department of medicine with what it was fifteen years ago can fail to be struck by the change which has come over it, not merely in details, but in fundamental principles of treatment. This change is the result of the new light which experimental pathology has thrown on the nature of disease processes in general, and on the factors concerned in their production in the skin as in other organs.

## MICROBES AND SKIN DISEASES.

Bacteriology, that "Open Sesame" which is unlocking the doors of so many secret caves of pathology, has revealed to us the true causes of several affections of the skin. Thus lupus, scrofulodermia, *post-mortem* warts, and certain forms of lichen and erythema have been shown to be the progeny of the tubercle bacillus; impetigo, sycosis, boils, and all suppurative conditions are recognised to be the result of invasion by micro-organisms. The precise microbic agents which produce leprosy and glanders are as well known as the itch mite, and although the specific micro-organism which is the cause of syphilis has not yet been identified its existence is generally accepted as an article of scientific faith, and in fact is taken as the basis of a practical rule of therapeutic conduct. It is not only as primary causes, however, that the importance of the part played by micro-organisms in the genesis of skin diseases has come to be acknowledged; the effects of their activity as secondary causes are now seen to be still more far-reaching. In general terms, it may be said that wherever there is a lesion of the skin—whether it be an abrasion, an inflamed patch, a dilated follicle, or a puncture or burrow made by a pediculus or acarus—there microbic invasion may take place. If it were possible, in such affections as scabies, acne, eczema, or lupus erythematosus, to separate the primary process from the secondary complications grafted on to it by the action of micro-organisms, it would be seen that often the lesions due to the former are almost insignificant compared with those which are the result of the latter. Illustrations of this will no doubt occur to all of you who have had occasion to see eczema, for example, in its typical uncomplicated form as an inflamed surface dotted with minute vesicles or in the "weeping" stage, with the same disease when scab formation is going on. In scabies, again, the secondary lesions are frequently so severe as altogether to overshadow those which are essential to the disease. The confusion arising from this cause has been the source of much of the faulty classification which has been the opprobrium of dermatology, and is still largely responsible for the difficulties in diagnosis which vex not only the general practitioner but the specialist. It is a proof that we are in the right way, and an assurance of more rapid progress in the future, that in dermatology, as in other departments of medicine, we are learning to distinguish the accidental from the essential, and to look in all cases for the primary characteristic lesion. How great a step forward this is in itself is too obvious to need dwelling on.



## VEGETABLE FUNGI.

The action of vegetable fungi in causing diseases of the skin need only be mentioned. The parasitic origin of ringworm, favus, and pityriasis versicolor is now so fully established that it is curious, and almost pathetic, to think that so acute and persevering a student of cutaneous pathology as Erasmus Wilson should to the end of his life have refused to believe that ringworm is caused by a fungus. The researches of Sabouraud have now shown us that there are several distinct species of trichophyton, and that the various forms of tinea in man are due to various forms of fungi, some being much more difficult to kill than others.

## THE USE OF ANTISEPTICS IN DERMATOLOGY.

In the domain of practice the teachings of bacteriology have borne fruit in the extensive use of parasiticide agents in the treatment of skin diseases. Such remedies have an exceptionally wide field of usefulness in dermatology, for, as as has been said, affections of the integument, however they may begin, are especially liable to become complicated by results of microbic action. There is, therefore, hardly a case of skin disease in which at some period or another of its course antiseptic and antiparasitic remedies are not indicated. It must not be inferred from this that the therapeutics of the skin can be packed up into this general formula, Use antiseptics. That, no doubt, is a sound rule of practice as far as it goes, but it is in the application of the rule to the particular case that the secret of successful treatment lies, and this is by no means so easy as it may seem to the inexperienced. It is not enough to "mow down" microbes with the therapeutic Maxim guns which chemistry has placed at our disposal. Some regard must also be paid to the *macrobe*, to borrow a phrase of the late Professor Peter's. The art of treating diseases of the skin to a large extent consists in feeling one's way; not only have the nature and intensity of the process which one has to deal with to be taken into account, but the idiosyncrasy of the patient's skin must also be carefully studied. Where active inflammation exists, this must first of all be subdued. To attack such a case at once with powerful antiseptics is as if one should attempt to extinguish a fire by pouring paraffin on it.

We must proceed cautiously step by step, beginning with the mildest applications, and increasing the strength of our remedies in proportion to the tolerance of the skin. This varies greatly not merely in different individuals, but in the same person at different times, so that in no province of medicine is a close attention to every detail of each particular case more necessary than in dermatology. The dermatologist's rule should be: Avoid setting up irritation. There are indeed conditions—as in certain forms of ringworm—in which we deliberately excite irritation (by means of croton oil, chrysarobin, etc.), with the object of getting rid of the fungi mechanically by causing exfoliation of the integument in which they are. This, however, is a somewhat rough measure, to be reserved for cases in which milder medication has failed.

It would be impossible in the short time at my disposal to discuss in detail the relative merits of the various parasiticides in ordinary use. In dermatology, as in other departments, each practitioner has his own preferences, his own "fads" if you will; and in the large number of remedies of the kind which we already have, and which is almost daily being added to, we have a wide range of choice. For myself, though ready to try all things in this field, I generally find myself driven back to the use of remedies such as boracic acid, salicylic acid, sulphur, mercury, carbolic acid, tar, and resorcin, my trust in which is confirmed by increasing experience. The ideal antiseptic still remains to be discovered, but in the meantime I am tolerably satisfied with those I have named. I have so often found the latest products of the chemical laboratory fail to come up to the expectations I had been led to form of them that I can only conclude that the power of a substance to destroy or check the growth of micro-organisms in a test tube is no measure of its therapeutic potency when applied to the human skin.

## IMPROVEMENTS IN THE MEANS OF APPLYING REMEDIES TO THE SKIN.

It is not so much in the discovery of new remedies as in

the improvement in the means and manner of applying those already known that progress has chiefly been made in recent years. The superfatted soaps introduced by Unna, the salve and plaster muslins which we owe to the inventive genius of the same specialist, the glycerine jelly or varnish suggested by Pick of Prague, the pastes introduced by Lassar and others, the cocoa butter sticks suggested by Brooke of Manchester, are all additions of the greatest value to the therapeutic resources of the dermatologist. These methods of applying medicaments to the skin are as superior to those used by our predecesssors of not many years ago as the Henry Martini's and magazine guns of the present day are to the muskets with which Wellington's battles were won. I do not say that we are better men than those who have gone before us, but assuredly we are better armed.

### Insufficiency of "Diathetic" Treatment.

These improvements in the weapons with which we combat skin diseases are the direct outcome of the much greater importance now attached to local medication than was the case not many years ago. As long as the influence of the older French school, represented by Rayer and Bazin, was in the ascendant, each skin affection was believed to be the outward and visible sign of a particular "diathesis," and, as a strictly logical consequence, it was against *this* that the therapeutic artillery was mainly directed, the local treatment being altogether secondary, and, so to speak, incidental. This superstition is by no means entirely extinct even now; distinct traces of it still linger in the profession, more particularly in the shape of theories as to diet which lead the patients being subjected to totally unnecessary restrictions in the matter of food and drink. It is a gratifying sign of progress that scientific dermatology is now almost wholly purged of the antiquated and often mischievous delusions as to the necessity and predominant importance of constitutional treatment in every case of eczema or psoriasis. I do not wish to be understood as denying that constitutional treatment is ever required in affections of the skin. On the contrary, I believe it to be of the greatest service when definitely indicated, and when combined with suitable local medication. I am only protesting against the superstitious notions that what you have in all cases to do is to treat the (often hypothetical) "diathesis," as it it were a fetich to be propitiated, while leaving the lesions to take care of themselves.

### The Supposed Danger of Curing Skin Lesions.

Another superstition, which still survives sometimes in quarters where one would least have expected to find it, is the notion that by curing skin lesions—especially those of eczema—too thoroughly or too quickly, you expose the patient to all kinds of "morbid determinations" to internal parts. I always try to cure my patients as rapidly as I can, and I have never seen the slightest ill result that could be traced to the cure of the lesions. Nor, in fact, do I believe that we have such a power of controlling the lesions as ever to make it in the least dangerous to exert the full force of our therapeutic resources against them. I confess I have often been tempted to believe that the notion as to the serious consequences likely to follow the "driving in" of eruptions, which is so firmly implanted in the public mind, was invented by some ingenious practitioner as a convenient excuse for the powerlessness of his art.

### Principles of Local Treatment.

To return to local treatment: not only have we better vehicles, but we have better remedies, and I think it may be added we apply them with a better adaptation of means to end. In the application of local treatment to lesions of the skin there are two essential conditions of success: First, as already said, the strength of the remedy must be carefully tempered to the violence of the disease; and, secondly, the application must be not only thorough, but continuous. The success with which we are able to deal at the present day with many affections that used to baffle the skill of our predecessors is due to the means of fulfilling the latter of these conditions which we now have in the salve muslins, jellies, etc., that have been referred to. Among the drugs which prove most useful in my own hands I may mention ichthyol, which is especially valuable in reducing hyperæmic conditions of all kinds; chrysarobin, which is the sheet anchor in the treatment of psoriasis, ringworm, and some forms of seborrhœic eczema; and pyrogallic acid, which properly used is equally serviceable as a stimulant and as a caustic. From the chemical laboratories have come new drugs—dermatol, aristol, europhen, losophan, gallanol, and a host of others—each of which has certain advantages which make it especially suited to meet some particular indication.

### Massage.

Massage, if it is not quite the panacea for all the ills that human flesh is heir to, as some enthusiasts would have us believe, has yet won for itself a definite place in dermatological therapeutics. There can be no doubt of its efficacy in improving local circulation, promoting the absorption of infiltration and soothing vasomotor disturbance. It is undoubtedly of service in thickened conditions of the skin, as in sclerodermia and elephantiasis; it is useful in œdema, and it has been employed with success for the relief of prurigo. Wherever there is effusion that cannot find an exit on the surface; wherever there is pain from pressure of imprisoned fluid or thickened tissues on the nerve ends; wherever there is stagnation of the blood stream, there massage is likely to be useful by its mechanical action on the parts to which it is applied. That, however, is the limit of its therapeutic virtue.

### Electricity.

Electricity has been used with a certain measure of success in pruritus, and other conditions in which functional disorder of the nervous system is a prominent factor: and electrolysis has given good results in certain cases of telangiectasis, angiokeratoma, and cheloid. The exact uses of the electric current in affections of the skin, with its possibilities and limitations, are, however, among the problems which further experience and investigation must solve for us.

### General Medication.

Passing now from the subject of local treatment, there is very little improvement to be noted in the matter of general medication. There is no fundamental alteration to be chronicled in the treatment of leprosy, syphilis, or tubercle. Tuberculin has, indeed, been to a very slight extent rehabilitated, or perhaps it would be more accurate to say that some cause has been shown why it should not be considered so utterly useless as it was thought to be. In some cases of lupus under my own care it certainly seemed to have modified the disease in some way so that it was more amenable to ordinary local treatment than it was before. Thyroid extract, which in the hands of Byrom Bramwell seemed almost to give promise that a specific for psoriasis had been found, has already fallen from its high estate as far as skin affections are concerned. Brown-Séquard's elixir has been tried and found wanting, nor has that newest birth of experimental science, "serotherapy" (used by Tommasoli in lupus) been more successful.

### Influence of the Nervous System on the Production of Skin Diseases.

Almost the only distinct evidence of progress apart from local treatment to which I can point, is the fuller recognition which has been arrived at of the influence of the nervous system in the production of skin affections. Schwimmer and others have shown us how many diseased conditions of the skin are demonstrably, or probably, traceable to suspension or diminution of the nervous influence regulating nutrition, and Leloir has taught us how often nerve lesion underlies skin lesion. The skin is in fact not only a mirror in which passing emotions are reflected, but a sensitive plate on which the effects of nerve disorder are "fixed," and, as it were, photographed. The knowledge of the intimate pathological connection between the nervous system and the skin gives the key to the successful treatment of many cases of dermatitis herpetiformis, eczema, lichen planus, etc., which defy all local measures.

### The Work and the Workers.

I cannot conclude this rapid survey of the field of dermatology at the present day without saying a word as to the

men to whose labours such progress as is being made is due. Among those deserving special mention are Unna and his disciples, constituting the new German school; to them we are indebted for much light as to the influence of micro-organisms in the production of skin affections, and in particular for a careful and suggestive study of the relations between seborrhœa and eczema. Among the members of the younger French school a prominent place must be assigned to Brocq, whose work on the treatment of skin diseases is the most exhaustive on the subject. In our own country, which may be called the birthplace of dermatology, the torch held aloft by Willan, Bateman, Erasmus Wilson, and Tilbury Fox has been handed on to Liveing, Crocker, Colcott Fox, Payne, Thin, Stephen Mackenzie, Pringle, Jamieson, and Brooke. In the hands of such men there need be no fear that the glorious heritage left us by our predecessors will suffer diminution, or that the traditional lustre of English dermatology will be dimmed.

## AN ACCOUNT OF BACTERIOLOGICAL OBSERVATIONS IN AN INDIAN DAIRY.

AN OBJECT LESSON]

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### A REGIMENTAL DAIRY IN INDIA.

By the kind permission of the officer commanding the East Surrey Regiment, I am enabled to publish the following account of observations that I made in the regimental dairy, which I venture to think are of some scientific interest, and which will illustrate the great difficulties that sanitation has to deal with in India.

At first sight the dairy appears to be admirably situated and the working arrangements capitally planned. The building is clean, well built, and in an isolated position, on a large open space, on which are other buildings devoted to various regimental purposes, and which is completely free from native houses. The native milk contractor is under the immediate supervision of a warrant officer especially appointed for the purpose. The milk cans are each provided with a lock and key, and have to be scalded out every day. The cows are brought to the dairy to be milked, and are only allowed to drink filtered water. An excellent well, known as the filter well, is situated about a hundred yards to the south of the dairy, and most stringent regulations have been issued that only water from this well should be used in the dairy.

### ITS WATER SUPPLY.

My attention was first drawn to the dairy by the following circumstance: I happened to be investigating the regimental soda-water factory, and was desirous of learning something about the well water that was used, and also about that which I was assured was never by any chance used in that factory. My attention was specially attracted by a well, which I may briefly call the east well, from the circumstance that it was situated a few yards nearer to the factory than any other. I entered into conversation one day with a few natives that were clustered round. One man told me the name of his profession, and pointed out another, carrying two buckets, as his son, who apparently was in the same profession and now engaged in fetching water. I then went on to ask him if the water was good, and whether it was used in the soda-water factory. The son immediately appeared to "smell a rat," and, saying something about filtered water, he went off in the direction of the filter well. This appeared to me to be a case of conscience, so I at once asked the father to show me his business. On this he took me to a dairy, which I soon learnt belonged to the East Surrey Regiment.

### THE DAIRYMAN AND HIS MILK.

The dairyman apparently took it into his head that I had been sent by Providence to be corrupted by him into getting him the contract for butter to be supplied to the fort garrison. He was much surprised that I took more interest in the thousands of flies that had committed suicide in his milk pans than in his dirty testimonials, and pointed out to me the east well as the one from which the water used in the dairy was obtained. He qualified this statement, when I next came to the dairy in company with an official that he knew, and protested that he only used the water from the east well for drinking purposes, and that filtered well water was always used for cleaning the dairy. I visited the dairy a few days later for the purpose of taking away samples of their water and milk. The dairymen saw me in the distance, and immediately began to empty the milk cans, which were on a table outside the dairy, and to wipe them dry. I arrived just in time to seize the last milk can, in which I found about a teaspoonful of water. The head dairyman explained to me that the water had been boiled, but was now cold. They were apparently scalding out the milk cans. As I afterwards found that this water contained about 88,480 living microbes per cubic centimetre, I have no doubt that it had been cold for a considerable time. I took away samples of every liquid I could find in the place, and examined them bacteriologically with the following results:

| | | Microbes per c.c. |
|---|---|---|
| Water in a galvanised iron pail, stated to have come from the filter well ... ... ... ... | contained | 1,000 |
| Boiled water above noted from the milk can ... | ,, | 88,480 |
| Water in which the butter had been kept since the preceding day ... ... ... ... ... | ,, | 435,200 |
| Water found in an earthen chattie used for cleaning the floor ... ... ... ... ... ... | ,, | 10,280 |
| Water in which to-day's butter had been placed... | ,, | 215,680 |
| Freshly boiled milk. A fly had fallen into the sample (about 5 c.c. taken away for examination, tested within two hours of boiling) ... ... | ,, | 2,300 |
| Water from a well bucket used for drinking purposes ... ... ... ... ... ... ... ... | ,, | 7,320 |

On the occasion of another surprise visit a few days later, I obtained results of a similar nature as follows:

| | | Microbes per c.c. |
|---|---|---|
| Water from a ladle taken out of the hand of a coolie who was washing the floor ... ... ... | contained | 13,440 |
| Water from a pail that was being used by the same coolie ... ... ... ... ... ... ... | ,, | 8,000 |
| Water with which the pot used for boiling the milk was washed out ... ... ... ... ... | ,, | 38,880 |
| Water in a large pan used for cooling the milk ... | ,, | 8,800 |
| Water from another pan used for the same purpose ... ... ... ... ... ... ... ... | ,, | 31,840 |
| Filter well water (?) in a large chattie ... ... | ,, | 12,800 |
| Buffalo milk examined about four hours after milking. They said it had been boiled ... ... | ,, | 73,600 |
| Water that had been placed in large earthen vessels for the cows to drink ... ... ... ... | ,, | 156,800 |
| Water taken by myself from the filter well ... | ,, | 11 |

Taking it as inevitable that harmless microbes should get into the milk and reproduce there, the question arises whether there is any chance of the entry of dangerous microbes. Obviously harmless and dangerous ones can get in or be kept out by the same means, and the presence of the first-named is, within limits, only objectionable in that it suggests the possibility of the presence of the latter. On investigating, I soon found that there was this possibility.

### TYPHOID EXCRETA AND THE WATER.

A track passed within a few yards of the dairy, and on this I met a soil cart carrying the refuse from the station hospital. I also found out that the soil carts, when not in use, are kept behind a disused latrine situated about 60 yards due north of the dairy. Instead of going by the road, the drivers of these carts—that carry typhoid dejecta from the hospital—take a short cut across the grass and so habitually pass within a few yards of the dairy. I think I am safe in assuming that as a rule during the last six months these soil carts have contained living typhoid bacilli. It is also probable that the outside of these soil carts are at least not bacteriologically clean. At any rate, as I was looking at them behind the latrine I noticed a cloud of flies buzzing over them. Flies are known to carry infection. The dairy is not far off; at that time there were no means of closing its windows, and hundreds of flies are to be found drowned every day in every milk-pan in the dairy. Here, then, is an obvious way in which typhoid bacilli may get into the milk and, what is perhaps more important, as it stays longer in the dairy, into the butter.

### CHOLERA AND THE WATER.

The water of the east well, situated about 50 yards from the