

from Bishops College. The gentleman from Toronto, however, is a licentiate of the Edinburgh College of Surgeons. Two of these gentlemen are District Medical Officers in the Immigration Department, and the other is Assistant Resident Surgeon in the Colonial General Hospital.

Progress of Medical Science.

RECENT ADVANCES IN THE THERAPEUTICS OF DISEASES OF THE SKIN.*

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I have thought it would not be uninteresting, possibly also not uninteresting, were I to summarize some of the more recent advances and improvements in the mode of treatment of skin diseases which have stood the test of practical experience, as an introduction to a course of lectures on diseases of the skin.

It has frequently struck me when reading over works on therapeutics, how small a space comparatively is in general devoted to the actions and uses of drugs when applied to the surface of the body, as compared with that set aside to the supposed influences they exert when swallowed or otherwise brought into contact with the mucous surfaces of its interior. I say supposed, because, though the mode in which some few substances so introduced act on the economy has been pretty satisfactorily worked out, there are still a vast number concerning the *modus operandi* of which we know very little indeed, some nothing at all. True, while certain remedies are taken under certain diseased conditions, certain results may with tolerable accuracy be predicated to follow, but in which way this is effected theory even does not in all cases explain. In the case of internal medicinal agents, the difficulty of unravelling this action is great, and all the more so, because in this country, through the influence of a misguided sentimentalism, experiments on the lower animals are practically prohibited; but the same difficulty should not be experienced to anything like the same extent in the case of external remedies. Take sulphur, for instance, when swallowed in a sufficient dose it acts as a purgative. In smaller and continuous doses it seems to increase the amount of water excreted by the skin, is a so-called diaphoretic, at all events it appears in the sweat, probably as sulphuretted hydrogen, for under such circumstance it blackens silver coins and ornaments. But what is its action when applied as a paste or ointment to the surface of the body? The answer to such a question would be

in the majority of cases, "it cures scabies and is good for acne." In the first case, probably the heat of the body oxidizes some of the sulphur, and as sulphurous acid it acts destructively on animal life; in the second, a different explanation must be given. Sulphur when applied to the surface of the body acts as an irritant and stimulates the cells of the rete Malpighi to a more rapid growth. Hence, when indirectly used, an increase of the normal desquamation of the cuticle and of that of the endothelial cells of the glands of the skin takes place. In acne this normal exfoliation is always sluggishly performed, and thus the stimulant action of the sulphur leads in time to a healthier condition. We may even go a step further, and maintain that so applied, sulphur rouses the muscular element of the skin to more active contractility, and thus diminishes the passive hyperemia of acne rosacea. One of the most active of the sulphur compounds, the sulphide of calcium, has been much praised by Ringer, in what may be called the furuncular diathesis, as hastening the maturation of those boils which have already appeared, and lessening the tendency to the formation of fresh ones. Bulkley has particularly insisted on its value in hordeolum or sty, several of which are so apt to form on the eyelids in succession. Sulphide of calcium is a very unstable salt, and it may well be that the sulphur set free from the calcium may in its nascent condition exert a special influence on the peri-glandular plexuses, and on the migration, fatty degeneration and death, of the exuded leucocytes. This, however, is but a theory; and while I believe that no one can satisfactorily use a remedy without a theory as to its mode of action, still this is not the place for airing hypotheses, but for placing before you ascertained facts.

In the treatment of skin diseases we rely much on ointments, as these have certain valuable properties not possessed by lotions or liquid applications in general. In conditions of chronic inflammation of the skin, the long-continued congestion leads to thickening and induration, which prevents the sebaceous and sudoriparous glands from performing their proper functions, so that the surface is not lubricated, and becomes dry, hard, and brittle. The oily material must be artificially replaced. Now in doing this the great difficulty has been that animal fats, of which prepared lard was the usual representative, and also most vegetable ones, soon became rancid, all the more rapidly when combined with metallic oxides or salts, and at the heat of the body. The fatty acids so engendered irritated and excoriated the skin, and the ointments often did more harm than good. At first, attempts were made to prevent the lard from becoming rancid by adding preservative ingredients, as benzoic acid, in Mr. Erasmus Wilson's zinc ointment. This was an advance, but benzoic acid is itself irritating. The Americans with their usual ingenuity came to our aid, and in cosmoline, a refined derivative from the destructive

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