LECTURE

ON

THE VARIOUS FORMS OF SKIN-IRRITATION DUE TO THE ADMINISTRATION OF DRUGS.

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THAT peculiarity of constitution which, for want of a better name, we call idiosyncrasy, forms undoubtedly one of the bugbears of therapeutics. In no given case can we confidently predict that calomel, or quinine, or iodide of potassium will not produce effects very inconvenient to our patients, and not improbably damaging to our own professional credit. For the public, unmindful or ignorant of the fact that medicine is far from being an exact science, naturally expect their doctors to save them from the unnecessary physiological effects of drugs, the mere swallowing of which is in itself more than sufficient penalty for the accident of sickness. A violent coryza or irritating and disfiguring rash will not unnaturally suggest to the sufferer that the remedy may really be worse than the disease; and we, who were in no degree prepared for their occurrence in this particular case, may be unjustly accused for our want of foresight; and, indeed, we can hardly blame uninstructed persons for their alarm on the sudden appearance of some quite unexpected symptoms superadded to the ordinary phenomena of their probably trifling ailment. Whilst particular drugs are taken, eruptions may suddenly break out, and simulate with terrifying accuracy the more infectious forms of zymotic disease. Measles may thus be, and often has been, more than suspected, until the further progress of events cleared up the diagnosis. Scarlet fever has been pretty accurately imitated. Pustules have appeared, bearing more than a fancied resemblance to small-pox or to syphilis. We can well imagine the consternation thus excited in families or schools or regiments; the probabilities of a rapidly spreading epidemic, with all its attendant horrors; the sage council of confident laymen; the final arrival of the doctor, who perhaps cannot at first do more than add the weight of his medical authority to the worst apprehensions of his patient; and when, at last, the whole matter is explained, and when it is made known that a trifling dose of physic was really the sole offender, the vials of wrath are too apt to be turned on the prescriber for ordering medicine of whose uncomfortable results he did not seem to be fully aware. Now, unjust as this might seem, the condemnation has this element of truth, that medical men should be fully informed of all these peculiarities of idiosyncrasy, and should even warn their patients beforehand that certain indispensable medicines are occasionally, but fortunately rarely, followed by certain pretty definite symptoms or appearances, which, as a rule, they can neither foresee nor avert. A large mass of evidence from many authentic sources, as well as the results of our own individual experience, must have convinced us that certain aspects of cutaneous irritation follow the administration of particular drugs with sufficient regularity and definition of form to stand in the relation of cause and effect. All of them are rare, and some of them so much so as to have been witnessed by few; but we are bound, notwithstanding, to accept the details presented to us on competent authority, and not rashly to lay down the dictum that, because we have prescribed a certain drug freely for many years without ill effect, therefore the observations of those whose experience has been more exceptional must necessarily go for nothing. I well remember, some years ago, trying to persuade a senior practitioner of good standing and leading position, that certain spots of acne, which I pointed out in the forehead of a lady, were due to the bromide of potassium prescribed by him. We are not yet in a position to give any really satisfactory explanation of these untoward results; but the first step towards a clear comprehension must necessarily be a fuller knowledge of the facts, and in the following remarks I hope to be able to give, in moderately brief compass, some kind of orderly sketch of the various forms of cutaneous eruption caused by the administration of special drugs.

But first, let us run over some of the effects produced by external applications; and by these I do not, of course, mean the various degrees of inflammation following the use of what we call counterirritants. We all know that, in proportion to the strength of the agent itself, to the duration of its use, and to the susceptibility of the skin to which it is applied, so is the degree of redness and smarting and vesication which follows, and with which we are all familiar in the case of

sinapisms and blisters. Croton-oil and antimony bring out a pustular rash, strongly suggestive of variola; but we have here to deal with invariable physiological action, and the only point which touches upon idiosyncrasy is the very varying tenderness of the skin, which we meet with more especially in private practice. There are persons in whom a single mustard-poultice will cause prolonged shedding of the cuticle, and a red stain persisting for days, and even weeks. I have seen one application of compound camphor liniment cause deep and obstinate ulceration; two paintings with iodine liniment are usually sufficient to produce an irritation far more distressing to patients than the defined pain of vesication. Remember also, that mercurial applications, and more especially the ordinary blue ointment, are very apt to bring out a crop of pustules, surrounding the roots of the hairs; and this can only be avoided by scrupulous cleanliness, and by constant change of the site of application. Tar also produces much the same kind of pustulating effect, but is much more irritating, and may even cause acute inflammation of the skin. A woman who was under my care last winter at the Skin-Department of St. Mary's Hospital, with an oblong patch of psoriasis on the leg, was ordered to apply unguentum picis liquidæ, and appeared the following week in great pain. Intense inflammation was found to have been produced on the sound skin, over an area several inches in breadth, and separated from the scales of the cutaneous affection by a band of greyish discoloration, apparently the precursor of a large slough. Careful sedative treatment happily averted this threatened accident, the moral impressed on my own mind being to use milder preparations of tar in future.

Salicylic acid, which was first introduced as a purely local application, and used with great success by Thiersch of Leipzig, in carrying out Lister's plan, has been found by Callender to be very irritating when applied to wounds. Thiersch was led to its use in preference to carbolic acid, because, whilst equally effectual as an antiseptic, it was found to be without stimulating properties. German skins, however, like German stomachs, are possibly less susceptible than our own; for the careful observations of Callender have certainly proved that a two per cent. solution invariably caused constitutional disturbance, with irritation of the skin, and the development of an abundant crop of vesicular eruption. Sir William Jenner has also mentioned a case where the application of salicylic acid to a burn caused a rash very like scarlet fever.

Chrysophanic acid also, now in very general use, has some special irritating properties, with which you require to be familiar. The most usual of these is the well-known violet or purplish tinge communicated to the patches of psoriasis, or tinea decalvans, to which it has been applied, occasionally overstepping the margin of the disease, running gradually over the whole scalp, and attended with unpleasant heat and itching. One woman, who was applying a five-grain ointment to her leg presented herself in great alarm, with almost erysipelatous redness, spreading rapidly from the site of application, but separated from the actual patches of psoriasis by a zone of perfectly unaffected skin. This caused a doubt in the minds of some whether the inflammation was really due to the acid; but all hesitation was removed by the somewhat characteristic tinge of the blush, and the fact that in all the instances of spreading irritation from chrysophanic acid which I have since seen, I have noted the same leap, as it were, from the focus of irritation to a cutaneous area some little distance beyond. A mother brought her little child to me the other day, to show a papular eruption on her face. She had been applying chrysophanic acid ointment to a patch of tinea tonsurans, and the whole scalp was of a dusky red, and covered with scurf; but I had no difficulty in here making out the line of untouched skin. From the head, the effect had spread to the face, which was covered with very minute papules, numerous and studded over perfectly normal skin, and attended by a good deal of itching and annoyance. On leaving off the ointment, the child very speedily quite recovered.

Chlorine gas, when applied in concentrated form to the skin, will cause redness and smarting, followed by a pustular eruption, and even erysipelatous inflammation; and sulphur is well known to be a cutaneous stimulant. Some of the worst cases of acute eczema I have ever seen have been produced by the very effectual, but sometimes too irritant, sulphur-applications in general use at our army hospitals.

But of all the occasional offenders of this sort against comfort, and even life, is arnica, which is commonly resorted to by the ignorant public as a sovereign remedy for sprains. It is pretty generally recognised among medical men, no doubt, that it now and then produces erysipelatous inflammation of the skin; but book-knowledge of this kind makes little impression, in comparison with the observation even of a single case. Professor Hebra of Vienna is one of the most persistent and strenuous opponents of arnica, and I well remember his vigorous denunciation of its evil effects, from the text of a very acute inflammation

of both hands, for which it was responsible, and where the skin was covered with huge blisters, and almost running into gangrene. A year or two ago, I had the opportunity of seeing a typical case, in the person of an old lady, to whose sprained arm a non-professional nurse had applied a weak solution of tincture of arnica contrary to my advice. A true erysipelas started from the point of application, and slowly spread over the whole body, causing much irritation and discomfort and depression, and greatly retarding her recovery from what would otherwise have proved a comparatively trifling injury. Phillips (*Materia Medica and Therapeutics*) tells us that if we use a watery solution, we are safe from the effects of the irritating ingredient which alcohol extracts; but the experiments of Garrod (*Materia Medica*, article Arnica) seem to me to have given a death-blow to the pretensions of arnica as an aid to the absorption of effused blood; and my advice to you is, to let this drug take its rightful place among those substances of extinct reputation, which still continue to sleep peacefully in the *Pharmacopœia*.

Before leaving this branch of our subject, let me remind you how certain skin-affections are caused by certain special substances, in domestic and commercial use, and how the soda-irritated hand of the washerwoman may stand as a type for many others. It would hardly have seemed necessary, however, to refer to this at all, were it not for the interesting fact, that workers in quinine manufactories appear to be subject to a very acute eczema of the hands, arms, and face, beginning with vesicles, running on to the formation of broad red patches, covered with thick scales, and occasionally presenting the variety of pustules, and even bullæ.

MM. Bergeron et Proust, in a valuable paper—*Des Eruptions Quiniques*—communicated to the *Annales d'Hygiène Publique* for May 1876, have given several cases of this nature; have shown how liable persons are to relapses who have once suffered from one seizure of this nature; and how even newly born infants have been attacked in consequence of the quinine emanations brought to the house by their parents.

The same authors tell us, that professional peelers of bitter oranges suffer occasionally from the same form of annoyances.

[To be continued.]

THE EFFECTS OF THE CONTAGIOUS DISEASES ACT AT WINDSOR.

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It has been the occasional custom of some of my colleagues and myself to send to the medical journals short reports of the relative amount of venereal disease in the Battalions of Guards in London and Windsor; and in my last one (*vide BRITISH MEDICAL JOURNAL*, November 1874), which extended over some years, I was able, after eliminating all sources of error in my power, to show—in my opinion, conclusively—that there had been a very great diminution of this disease in the protected district of Windsor.

With the sanction of the Surgeon-Major of my regiment, I recur to this subject, thinking this to be a fitting time for so doing.

It might easily be inferred that, in battalions moving to and fro every six months between a protected and an unprotected district, within easy reach of one another, the Act could scarcely be proved of much avail in the former; but if, on the contrary, it can be shown that the Act does decidedly diminish disease there, how much greater must be its benefits in more permanent garrisons!

I have always maintained that, though our statistics are limited, and liable by too great generalisation to incorrect deductions, the effect of this Act at Windsor is so invariable and so great, that our records are most valuable in proof of its benefit to the troops; and I believe that, if the most determined opponent were to visit the sick of a battalion of Guards after some months' residence in London, and again after a similar period in Windsor, his opinions would undergo a considerable change.

The first battalion of the Coldstream Guards was stationed in London in 1877, and for the first half of 1878, the second half of the year being passed in Windsor; and its admissions for venereal disease were, as the following table shows.

	1877.	1878.
Average strength	London, 813 ..	London and Windsor .. 877
Admissions for primary syphilis ..	139 ..	{ London, 6 months, 75 } 100
		{ Windsor, 6 months, 25 }
Ratio per 1,000	170 ..	114
Admissions for gonorrhœa	102 ..	{ London, 6 months, 45 } 75
		{ Windsor, 6 months, 30 }
Ratio per 1,000	125 ..	86

This table shows, therefore, a decided diminution of disease in 1878,

comparing it with 1877, and a reduction by two-thirds of primary syphilis and one-third of gonorrhœa in Windsor during the second period of 1878. This, however, is not a fair analysis of the two periods of 1878, and, to make it one, I will now deduct diseases contracted out of the Windsor district during the second period (1878).

Period.	Station.	Syph. prim.	Gonorrhœa.
January to July ..	London	75 ..	45 ..
	In district	10 ..	23 ..
July to December..	Windsor	Out of do. 15 ..	Out of do. 7 ..

Therefore, the true reduction in Windsor, as affected by the Act, is: for primary syphilis, from 75 to 10 admissions; and for gonorrhœa, from 45 to 23.

When it is considered how easily prostitutes can be harboured within easy reach of Windsor, and thus escape examination, it may be a source of surprise how such a reduction in disease can be effected; but the soldier of irregular habits has at least his regular haunts, and, consequently, the women with whom he associates are well known to the police; and, as a result of the Act, their number has been greatly reduced there. I am strongly of opinion that, if the Act could be brought into force in London, in such a way only as to apply to the prostitutes frequenting the public-houses in the neighbourhood of each barracks, we should soon see a very great diminution of venereal disease amongst the troops quartered there.

A RARE FORM OF SKIN-DISEASE.

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THE following case is so unusual, that it seems to me not unworthy of report.

On October 14th, 1878, a little girl, E. M., two-and-a-half years of age, was brought to me. She was born at full time, was vaccinated when six months old, and, up to June last, had been free from illness and disease, being an exceptionally robust child. Both her parents are alive and in good health, and she has five brothers and sisters, who are healthy and well developed, and have suffered from no unusual ailment, and are free from any disease of the skin. There is no history of syphilis in the family, nor any evidence of the existence of any such taint.

When the child came under my notice, she was well nourished, and her general health excellent. The unaffected parts of the skin were normal, with the exception that the lower extremities were somewhat unusually "mottled" or marbled. The mottling disappeared on pressure, and there was no appreciable pigmentation.

On the front of each upper arm there existed an almost circular spot, about three-quarters of an inch in diameter, the circumference of which was a hard ring, fibrous to the touch, elevated above the surrounding skin about the twentieth of an inch, and about the sixteenth of an inch in breadth. The interior of this ring was occupied by a pitted cicatricial tissue, studded with small depressions like the cut peel of lemon, and with a well-marked pit in the centre. The whole spot was of a reddish-purple hue, and darker than the surrounding skin, the central pit being most deeply coloured. There were neither scales nor crusts, nor could I perceive any yellow staining.

A similar spot existed at the base of the right thumb on the palmar surface, and another on the knuckle of the first finger of the right hand. There was a like spot on the outer aspect, and two on the back of the right thigh, one on the inside of the right leg, just below the knee, and another on the posterior surface of the leg. One such spot existed on the inside of the left thigh, while there was only one on the outside of the left leg.

The head, body, and feet were not affected. The spots on the insides of the thighs were most completely marked, being about an inch in diameter, while on the back of the left thigh, four dark-coloured nodules had recently developed.

The order of the appearance of the rash was, first, on the upper arms, then on the right hand, and afterwards on the lower extremities. From the time when these spots were first perceived, and subsequently, the child had remained in her usual excellent health, neither was any irritation nor inconvenience experienced.

There had been no liver derangement, and the action of the child's bowels was regular and natural.

Since the little girl came under my observation, the spots on the arms and hand have begun to fade, though the mother tells me that such was not previously the case, for the existing maculæ were increasing in size, and fresh ones appearing. When I saw the child a few days ago, the older spots on the lower extremities were also losing