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CLINICAL NOTES ON LICHEN PLANUS.

Read in the Section of Dermatology and Syphilography, at the Forty-second Annual Meeting of the American Medical Association, held at Washington, D. C., May, 1891.

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Although lichen planus is one of the more rare diseases of the skin, it is one which occurs frequently enough to warrant the general practitioner being well acquainted with its natural history and therapeutics, while the very considerable suffering sometimes caused by the eruption, and its occasional rebelliousness to remedies, demand a further study from the specialist in regard to its nature and treatment. It is with a view of aiding in both these directions, that I have ventured to bring before this Association the experience which I have had with the disease during the past twenty years.

Erasmus Wilson¹ was the first to call attention to lichen planus, over twenty years ago, and his description of the eruption was so clear and graphic that it was at once recognized, especially in this country and England, and has long found a place in most dermatological classifications; and repeated reports on its clinical features have established them so clearly that, in this country at least, it is now one of the best known eruptions of the skin in dermatological practice. As the description given by Mr. Wilson, in one of his earlier papers, is very lucid and complete, I may be excused for quoting it somewhat at length:²

"Lichen planus is an eruption of pimples remarkable for their color, their figure, their structure, their habits of isolated and aggregated development, their habitat, their local and chronic character, and for the melasmic stains which they leave behind when they disappear.

"The color of the pimples is of a dull crimson-red, more or less livid, and suffused with a purplish or lilac tinge. It is most characteristic in

the recently developed and discrete papules, and in the aggregated form is apt to assume the dusky hue of ordinary chronic affections of the skin. The striking color of the papules contrasts very strongly with the unaltered complexion of the skin on which they are developed. Indeed, it is generally the color and appearance of the pimples, without other symptom, that first attracts the attention of the patient to the disorder, and urges him to seek for relief.

"In figure the papules are flattened, smooth, and depressed on the summit, angular in outline, only slightly elevated, and of a size ranging between 1 and 3 lines in diameter. And this peculiarity of figure is so striking that we have selected it as the pathognomonic characteristic of the eruption. The redness may be the first sign to strike the eye, but redness is a phenomenon common to many eruptions of the skin; although, as we have just said, the redness of lichen planus is peculiar, whereas the flatness of the summit of the papules is altogether different from anything that is met with in other affections of the skin; and the flatness is rendered more conspicuous by the summit of the papule being occupied by a thin, horny, semi-transparent lamina of cuticle, depressed on the surface, and marked in the centre by the aperture of a follicle, which represents a sort of *hilum*. It is to this peculiarity of figure that the word *planus* is especially applicable, and this has guided our use of the term."

Lichen planus is rather an easy eruption to diagnose if these peculiarities are borne well in mind, for, as far as I have observed the disease, there are always primary lesions to be discovered somewhere, generally at the edge of the eruption, however old or altered it may be in character; and these primary lesions will always present the flat summit, with the depression in the centre.

In some instances, plaques of considerable size are formed by the aggregated papules of lichen planus, and especially on the lower legs these patches will, at first sight, be not at all suggestive of the eruption in question, but will resemble a dry, hard patch of eczema, of a purplish brown color, with adherent epidermal covering. But on closer inspection, the edges of

¹ Wilson, *Diseases of the Skin*, sixth edition, London, 1867, p. 190.

² Wilson, *Journal of Cutaneous Medicine*, Vol. iii, London, 1869, p. 117.

the patches are seen to be very sharply defined, and abruptly raised, quite differently from anything seen in the latter eruption, and every lesion will be found to have the flat summit characteristic of the disease. The form of the lesions has been likened to an inverted flower pot, only not proportionately so high, with the steep edges, and the hole in the centre, making the *delle* or depression seen in the papule of lichen planus.

The location of the eruption, or its seat of predilection, is also rather peculiar or characteristic. It is pretty constantly met with about the wrist, either on the flexor or extensor surface, and a few or many papules develop on the back of the hands. The next most frequent locality is on the lower legs, especially on the anterior aspect, and commonly it comes on the body only after there has been a considerable development on the extremities. In rare cases it attacks also the palms and soles, and still more rarely the face; it has also been observed by Wilson and others on the tongue, and in one of my cases which was very severe and general, the tongue and buccal cavity were badly affected, giving rise to great suffering. Some years ago,³ the present writer reported two cases of lichen planus where the eruption developed on the glans penis some weeks before appearing elsewhere, when it attacked the usual parts and presented characteristic appearances.

There is still another rather remarkable characteristic of the eruption of lichen planus, which is, that the papules or patches generally leave behind them a pigmentation much greater than would be ordinarily expected from such lesions; and this staining is measurably proportionate to the duration of the eruption or of the individual portions of it. In some instances the discoloration will be of a deep brown, and may persist weeks or months. In other instances it may be very light, and quite transient, but it is always a recognizable feature.

Much difference exists, in different cases, in regard to the subjective symptoms in lichen planus. In some cases, mild in character, there will be very little itching, and the eruption will give little inconvenience except from its appearance, while in certain cases the burning and itching attending the eruption are so severe that the sleep is greatly broken, and the suffering occasioned is excessive. Between these there may be all degrees of inconvenience, but in the main the disease is not characterized by much itching; the single papules appear from time to time, often unnoticed until seen.

Lichen planus, as before remarked, is one of the rarer diseases of the skin, and in statistics from a large number of cases, stands far down the list in regard to its relative frequency. In

my experience, among something over 10,000 cases of skin disease in my clinics at the New York Hospital, and the Skin and Cancer Hospital, there occurred forty-five cases of lichen planus, giving a percentage of .45. Among something over 7,000 skin cases in private practice, of which I have record, there have occurred forty-six cases of lichen planus, giving a percentage of a trifle over .65. The slightly larger relative proportion in private practice is probably accounted for largely by greater attention which would be paid to such an eruption among the wealthier classes, where the disfigurement would call for relief, even if the itching were not troublesome. The combined statistics from these two classes of patients give a total of ninety-one cases of lichen planus among some 17,000 cases, or over 53 per cent. The following table I shows the ages and sex of the cases:

TABLE I.—AGES OF PATIENTS WITH LICHEN PLANUS.

AGE.	Private Practice.		Public Practice.		Grand Totals.
	Males.	Females.	Males.	Females.	
3 years	...	...	1	...	1
15 to 20 years	...	...	1	...	1
20 to 25 years	1	2	5	3	11
25 to 30 years	4	...	1	2	7
30 to 35 years	1	1	1	3	6
35 to 40 years	5	3	2	3	13
40 to 45 years	3	3	1	5	12
45 to 50 years	4	5	5	1	15
50 to 55 years	3	5	4	5	17
55 to 60 years	2	2	...	1	5
60 to 65 years	...	...	...	...	...
66 years of age	1	1	...	1	3
	24	22	21	24	91

The eruption affects males and females in almost the same proportion, there being forty-five males to forty-six females. It will be further seen from this table, that the eruption is one of adult, or rather middle life, fifty-seven of the cases, or 62 per cent., coming between the ages of 35 and 55 years. There were but two patients under 20 years of age, both males, in public practice, and few after 55 years of age. Curiously enough, there were three patients with the eruption who were just 66 years of age. It is a little peculiar that all but two of the twenty-two females seen in private practice were married, and seven out of the ten females seen at the New York Hospital were also married. I have not the data in regard to the fourteen females at the Skin and Cancer Hospital, nor can I learn the marital relations of the male patients. I can hardly believe that this can have any influence in the disease, but it may be a clinical fact worth noting. The two unmarried females were aged 23 and 56 respectively.

Lichen planus has, as far as I know, no tendency whatever to spontaneous recovery. The following table II gives the duration of the disease, before coming under my observation, in forty-eight cases of lichen planus in private and

³ Bulkley, Archives of Dermatology, New York, Vol. vii, 1881, pp. 135, 392.

public practice. Many of the cases had been under other treatment; some had been entirely neglected.

TABLE II.—DURATION OF LICHEN PLANUS IN 48 CASES AT THE TIME OF APPLYING FOR TREATMENT.

DURATION.	Male.	Female.	Total.
Three months and under.	9	10	19
3 months to 6 months.	3	5	8
6 months to 1 year.	7	3	10
2 year to 2 years.	1	2	3
1 years to 3 years.	..	1	1
2 years to 4 years.	1	..	1
4 years to 5 years.	..	..	..
5 years to 10 years.	1	2	3
10 years to 15 years.	..	..	..
15 years to 20 years.	1	..	1
Unknown.	1	1	2
Total.	24	24	48

Here we see that while in a considerable number of them, the disease had lasted but a few months, there were some of the patients who had had the eruption a year or more, while in three instances it had remained between five and ten years.

Lichen planus is also rebellious to treatment, as is shown by table III, which exhibits the length of time during which forty-six patients with the eruption were under observation and treatment.

TABLE III.—DURATION OF OBSERVATION OF 46 PATIENTS WITH LICHEN PLANUS.

DURATION.	Male.	Female.	Total.
Three months and under.	7	6	13
3 months to 6 months.	7	3	10
6 months to 1 year.	..	3	3
1 year to 2 years.	2	..	2
2 years to 3 years.	1	2	3
3 years to 4 years.	1	1	2
4 years to 5 years.	..	1	1
Seen once only.	5	7	12
Total.	23	23	46

The *prognosis* of lichen planus, therefore, although good as to an ultimate cure, if proper treatment is faithfully carried out, should always be a guarded one in regard to the duration of the eruption, for under the very best of treatment the eruption may persist for weeks, or even months, and even under the best circumstances, seldom disappears very rapidly.

The *diagnosis* of ordinary cases of lichen planus should not be very difficult, if due regard be paid to the peculiar and almost pathognomonic features of the eruption which have been already mentioned; and, as before remarked, some of the primary lesions, quite characteristic in appearance, can usually be discovered in every case, if sufficient diligence be exercised.

The only eruptions which should ever be mistaken for lichen planus are, a newly developing psoriasis punctata, a papular eczema, a lichen simplex, scabies, a papular syphilide, and erythema papulatum.

Some time ago, Mr. Jonathan Hutchinson⁴ described this eruption under the name of lichen-psoriasis, and the mistake of confounding lichen planus with psoriasis is the more justifiable, because, as he has pointed out, the lesions of the latter, when they are just developing, present minute punctate spots, with a shiny summit, like those of lichen planus; and only this morning I saw a new case of the eruption under consideration, which had just been diagnosticated as psoriasis punctata by the family physician. As this case is one of very considerable interest, and as it makes the fifth case in which the eruption has developed largely on the glans penis, I may be excused for mentioning it somewhat in full.

Mr. H., aged 28, a strong, well developed and healthy man, with dark complexion and weighing 150 lbs., has never had any eruption before; nor, indeed, suffered from any illness. He never touches spirits or beer, but smokes ten to fifteen cigars daily. Three or four months ago, without any apparent cause, some papules developed on the right arm, on the anterior aspect, just below the bend of the elbow. The number increased every day, and one week later some similar papules appeared on the left forearm in the same situation; their number then increased in both localities up to about a month ago, the new ones coming both on the upper arms and down towards the wrists, and more lately a few small spots have appeared on the backs of the hands. About a month after the first appearance on the arms, similar points developed at the root of the neck, and soon formed several groups, extending along toward the shoulders. All of these papules have remained from the first, and at about the same size, seldom increasing to more than 2 or 3 millimetres in diameter, and not changing at all after they have become fully developed.

About a month after the first appearance of the eruption on the forearms, some points developed upon the glans penis, which increased in number and coalesced, forming patches 5 to 8 centimetres in diameter, of irregular shape, covering half the glans, and also many on the foreskin; these also have remained in much the same condition for the past month. There was little itching with the development of the eruption, but now he experiences considerable discomfort therefrom, especially at night, and particularly on the penis.

The cutaneous condition may be thus briefly described: On the anterior aspect of the upper arms, and the radial side of the forearms, there is an eruption, more pronounced about the bend of the elbow, composed entirely of flat, pinkish-red papules, many of them touching one another, but in no place making anything of a patch. The papules are of quite uniform size, but some of them a little irregular or star-shaped, and with a glazed summit, but nowhere surmounted by a

⁴ Hutchinson, Clinical Lectures on Rare Diseases of the Skin.

perfect scale. Some of them show marks of scratching, and have a more inflamed, red surface, covered with dried exudate. On the flexor surfaces of the left forearm are two very marked papules of large size, sharply defined, and more red than the others; these have been there almost from the first. On the backs of the hands there are a few scattered, red papules, similar in character to those seen elsewhere, most of which are dellated or slightly depressed in the centre.

On the glans penis the eruption, which covers half of its surface, is composed of slightly raised, purplish patches of various sizes and shapes, hard and slightly scaly on the surface, and giving a rather leathery sensation when handled. The prepuce, extending to nearly an inch when retracted, is about half covered with irregular papules and streaks, of a brownish purple, made up of similar papules, also somewhat scaly on the surface; as before stated, the eruption on the organ has remained about the same for a month. There is as yet no eruption on the legs, nor elsewhere than mentioned.

In a guttate psoriasis, which might affect almost the same extent of surface on the forearms, we would have the newly formed papules covered with a more silvery, easily detached scale; the color also would be more livid, and they would not be so decidedly flat and depressed in the centre. Moreover, in this particular case, the diagnosis from psoriasis could be made with certainty by the clinical history, for no psoriasis could remain, as this had, during three months in the same condition; for we know that the papules of psoriasis, which begin very small, invariably enlarge quite rapidly, and in this time would have presented, somewhere, typical lesions of the disease.

Lichen planus is sometimes rather difficult to differentiate from papular eczema and ordinary lichen simplex. But in both of these the papules are more acutely inflammatory, are always acuminate, and never flatten down so as to present the appearances described as characteristic of lichen planus; moreover, these eruptions are more violently itchy from the first, than is that under consideration.

The scattered papules of scabies, sometimes seen on the forearms and about the elbows and abdomen, may suggest lichen planus, but they resemble those of eczema more in character, and the diagnostic marks of scabies elsewhere should establish the diagnosis.

A newly developing papular syphilide sometimes resembles the eruption of lichen planus; but the eruption is more general from the first, while, as we have seen, lichen planus comes out slowly, it being commonly localized in one place for some time before appearing elsewhere. Moreover, the papules of the syphilitic eruption are never so flat and shiny as those of lichen planus, nor have they the central indentation, and the

scale which soon forms on their summit is very characteristic, being of a yellowish brown, attached in the centre, with the edges tending to become loosened. The general and other signs of syphilis will also commonly serve to prevent this mistake.

Erythema papulatum, coming as it very frequently does, about the extensor, and also flexor, surfaces of the wrists, does sometimes suggest lichen planus very strongly. But the papules of this eruption are much larger, as a rule, more elevated and rounded on the summit, and have not the peculiar purplish-pink lustre which can generally be found on the papules of lichen planus. Moreover, the lesions of erythema papulatum commonly come out very quickly, present much more inflammatory character, and subside much more quickly than do those of lichen planus.

For some years past there has been more or less discussion among dermatologists, in this country and abroad, respecting the relation between, or rather the identity of, the *lichen planus* as here described, and as we know it here and in England, and the lichen ruber, as it was so graphically described by the elder Hebra, in Vienna, twenty or more years ago. The subject is an important one, both as affecting prognosis and treatment, but it is also an intricate and difficult subject to discuss, and one which cannot, with profit, be entered upon on the present occasion. It was very thoroughly discussed, both from its clinical and histological aspects, by Dr. A. R. Robinson,⁵ of New York, some time ago, and as his views coincide wholly with my own, I cannot do better than to give you his brief but convincing conclusions, as follows:

"From a comparison of the symptoms, histology, prognosis, and treatment of the two forms of eruption, we find that as regards the symptoms: in lichen ruber the papules generally commence on the trunk, and tend to extend over the entire body, and in lichen planus they generally commence on the forearms and legs, and very rarely spread over a large area. In lichen ruber the papules are round, acuminate, covered with thin scales, and only show a depressed centre when situated around a hair follicle or undergoing a retrograde process; in lichen planus the papules are mostly angular in outline, generally umbilicated, and never scaly at the commencement. In lichen ruber the eruption is not symmetrical, and the papules do not increase by growth at the periphery; in lichen planus the eruption is generally symmetrical, and many of the papules increase in size to a certain extent by spreading peripherally. Lichen ruber, if not treated, tends to marasmus and death; lichen planus has no special effect upon the general condition of the system.

⁵ Robinson, Lichen Ruber and Lichen Planus. G. P. Putnam's Sons, New York. 1883.

"From microscopical observation we find that lichen ruber is an atypical keratosis, and lichen planus an inflammatory affection of the papillæ of the upper portion of the corium, with subsequent changes in the epidermis. In lichen ruber the corneous layer is hypertrophied, the rete also slightly thickened, whilst there are few or no changes in the cutis; in lichen planus the corneous layer is often absent, the rete is thickened, and there is a dense round-cell collection in the papillæ and upper part of the corium. Lichen ruber is, therefore, an anomaly of growth of the corneous layer, and lichen planus an inflammatory affection of the vascular portion of the skin." He also argues, very conclusively, that the two eruptions are also not two forms of the same disease, nor are they different stages of the same eruption, and I may say that, being more or less conversant with lichen planus in Vienna, and also with certain rare cases which have occasionally been met with in this country, I am myself most thoroughly of the opinion that lichen ruber and lichen planus are radically two entirely distinct diseases.

I had hoped to be able to give details of some very interesting and severe cases of this disease which have been under my care, but this paper has already exceeded the limits I had proposed to read, and will defer their presentation, but will make a few comments on the general features of the disease, as they have presented themselves, especially in private practice.

I have been constantly impressed with the observation of the far greater severity, and also obstinacy, of the eruption, in women than in men. In looking over my notes of the eruption in the latter, I find very few instances where the eruption was very general, and hardly any one where it caused what could be called any very great distress. But among the female cases I find a dozen cases in whom the eruption became very general, and in nine or ten of these, the suffering from the disease was very great indeed. In one of them the eruption had lasted two years before she came under my care, and another lady had suffered fifteen months. In several of these cases it was necessary to make use of internal quieting remedies in order to get any rest at night. I have also been struck by the fact that, in most of the cases in females, in private practice, certainly those who have had the eruption at all severely, the sufferers had been accustomed to the very great use or abuse of water on the skin, in the way of cold daily general ablutions, so that of late I have inquired into the fact, and seldom fail to find this to be the case. As this is a more common custom among females than males, in this country at least, I have been led to believe that it is an element of causation to be taken into account; and in a number of the cases occurring in males I have found the same habit to prevail.

Occasionally, even a quite severe eruption will disappear very shortly under but very moderate treatment, and in one instance a very general eruption, on a lady aged 52, vanished very shortly after her single visit, and apparently without the aid of treatment; but this is a great exception. In one instance an eruption in a gentleman, which had resisted pretty faithful treatment, disappeared under the employment of the cuticura remedies after he had ceased attendance; but, on the other hand, I find notes of other cases where these remedies had been tried in vain before coming under my care.

In regard to the *treatment*, inasmuch as we know very little as to the real causation of the disease, it is very difficult to give an intelligent explanation as to the lines to be pursued. The patients generally appear to be in good general health, and there is very little to take hold of in the way of rectification of supposed errors. We know, however, that the eruption is of a congestive and inflammatory nature, and it appears to be due to a suboxidation process closely akin to that found in eczema and other inflammatory diseases of the skin; and practically this line of treatment is that which is found to yield the best results—indeed, when faithfully carried out, this is commonly very satisfactory.

The alkalies, given with a free hand, will not only serve to mitigate the suffering of the patient, but arrest the further development of the eruption; and of these, acetate of potassa, with nux vomica and a bitter infusion, after meals, have served me about the best. Constipation must, of course, be carefully avoided.

An empiric sort of a prescription was suggested by the elder Bœck, of Norway, when in this country some years ago, and was strongly recommended by Taylor,⁶ in his clear and practical article on the disease some time since; and this has also done me most excellent service in many cases. It consists in the administration of from 10 to 20 grs. of chlorate of potassa, dissolved in considerable water, directly after each meal, followed in half an hour by 20 drops of dilute nitric acid, also well diluted. It was supposed to act as an oxidizing agent, promoting the assimilation of food, and the disintegration of effete substances.

After a cooling course with one of the above, a more tonic course is often required, and then nothing is better than the sulphate of iron, with sulphate of magnesia and sulphuric acid, in what is known in the dermatological world as Startin's mixture. Arsenic, in my hands, has been of very little use in this eruption; indeed, in the more acute stages, seems to aggravate the eruption.

In regard to diet, very little can be said, for we know so little of the causes underlying the eruption. But as it is an inflammatory affection, and associated more or less with a deficient oxi-

⁶ Taylor: Archives of Dermatology, Vol. I, No. 1, 1875.

dation process, the diet should be simple and nutritious, avoiding entirely stimulants and all food of difficult digestion, and also articles liable to undergo acid fermentation. Excess of sweets certainly has seemed to aggravate the eruption in my experience.

Locally, considerable can be done by properly directed measures, both in the way of relieving the general suffering and checking the disease.

In acute cases, the well-known calamine and zinc lotion, with an extra proportion of carbolic acid, certainly gives great relief, and seems to check the development of the eruption.

Ichthyol, in a 2 to 4 per cent. watery solution, kept freely applied, is also grateful and beneficial. When the skin becomes at all dry, a 1 or 2 per cent. carbolized vaseline, freely applied, is the best application.

In more chronic conditions, or when the eruption remains quite localized, the treatment suggested by Unna will sometimes seem to produce a remarkable result. This is a diachylon ointment containing even as high as 4 per cent. of carbolic acid, with bichloride of mercury added in slowly increasing quantity, beginning with 2 grs. to the ounce I have, in rare cases, seen the amount of the corrosive chloride increased gradually, until the patient bore well even 10 or 15 grs. to the ounce. This is of course a great exception, and this plan of treatment should be used with caution, although, when intelligently carried out, it certainly removes the chronic, obstinate lesions, more certainly than almost any other.

Alkaline baths are often of much service in this eruption, and may be taken two or three times weekly, followed by the calamine and zinc lotion, or the carbolized vaseline. On the other hand, as already mentioned, it has strongly impressed me, especially in regard to my cases in private practice, that too great bathing of the skin, especially cold bathing, has been often one of the chief features of causation of the eruption. I have also seen Turkish and Russian baths greatly aggravate the eruption. Sulphur vapor baths are certainly harmful, in my experience.

In conclusion I may say that, although lichen planus is a comparatively rare disease, still, like its first cousin, psoriasis, it is well worthy of careful study; for when recognized, and properly treated, it is curable, whereas, if neglected, it tends to remain and increase often to the very great distress and discouragement both of the physician and patient.

4 E. 37th Street, New York.

OLEO RESIN of male fern is best exhibited in combination with potassium bromide to secure the expulsion of the tape worm. The object is to reduce peristaltic action.

EARLY PSYCHICAL SYMPTOMS OF TRAUMATIC BRAIN INJURIES.¹

Read before the Section on Medical Jurisprudence and Neurology at the Forty-second Annual Meeting of the American Medical Association, held at Washington, D. C., May, 1891.

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The department of neurology in the practice of medicine has attained such proportions that it would be almost impossible in the limits of a single paper to give any complete history of the advances of even one year.

In this country there are six large journals devoted exclusively to this branch. Five quarterlies and one monthly, viz: *The Journal of Insanity; The Alienist and Neurologist; The Journal of Psychology; The Journal of Mental and Nervous Diseases; The Journal of Inebriety; and The Review of Insanity and Nervous Diseases.*

Abroad, the periodical literature is more voluminous, and books and pamphlets follow each other rapidly. A neurological library of to-day, to be complete, would number thousands of volumes and pamphlets.

This would be exclusive of the literature which appears in the general journals, comprising records of cases, theories, and discussions of diseases of the brain and nervous system.

The different fields of neurology have been studied until the specialists find it almost impossible to master more than a single phase of the subject. The lunacy specialists, the specialists of nervous diseases, the specialists of alcohol and drug diseases, the specialists of idiocy and congenital diseases, the experimenter and teacher of psychology, and the electrician are all examples.

The unknown regions of the physiology and pathology of the brain and nervous system are attracting an increasing number of most ardent students, and already the discoveries are very numerous and startling, and the process of learning and unlearning is more and more difficult. In the department of *Medical Jurisprudence* progress and change is less rapid. Seven medico-legal societies and one large quarterly present the many practical topics which are constantly appearing.

The confusion of theory and practice in both law and medicine, relating to questions of crime and responsibility, has given rise to many strange conceptions of the teachings of science. Thus, from the text books and legal rulings of judges, the lines of sanity and insanity are laid down as absolute facts. Free will, and accountability, judgment, punishment, equity, with brain control and capacity, are regarded as settled facts, based altogether on theory. All these questions comprise a realm of the densest superstition and error that will continue until studied scientific

¹ Address by the Chairman of the Section.