

**The relation between the teeth, and certain diseases of the skin and mucous membrane / by W. Knowsley Sibley.**

**Contributors**

Sibley, Walter Knowsley, 1862-  
Royal College of Surgeons of England

**Publication/Creation**

London : John Bale, Sons & Danielsson, 1911.

**Persistent URL**

<https://wellcomecollection.org/works/d4x5t2k3>

**Provider**

Royal College of Surgeons

**License and attribution**

This material has been provided by This material has been provided by The Royal College of Surgeons of England. The original may be consulted at The Royal College of Surgeons of England. where the originals may be consulted. Conditions of use: it is possible this item is protected by copyright and/or related rights. You are free to use this item in any way that is permitted by the copyright and related rights legislation that applies to your use. For other uses you need to obtain permission from the rights-holder(s).



Wellcome Collection  
183 Euston Road  
London NW1 2BE UK  
T +44 (0)20 7611 8722  
E [library@wellcomecollection.org](mailto:library@wellcomecollection.org)  
<https://wellcomecollection.org>

# The Relation between the Teeth, and certain Diseases of the Skin and Mucous Membrane

15.

BY

W. KNOWSLEY SIBLEY, M.D.

[Reprinted from the "Proceedings of the Royal Society of Medicine,"  
May, 1911]



London

JOHN BALE, SONS & DANIELSSON, LTD.

OXFORD HOUSE

83-91, GREAT TITCHFIELD STREET, OXFORD STREET, W.

—  
1911





*With the Author's Compliments.*

*70, Duke Street,  
London, W.*







## The Relation between the Teeth, and certain Diseases of the Skin and Mucous Membrane.

By W. KNOWSLEY SIBLEY, M.D.

---

FOR many years I have often noted a connexion between eruptions on the face, scalp, and neck, and an unhealthy condition of the teeth or gums. Two explanations are apparent. The one, that the skin complaint is the result of an irritation, of one or more branches, of the fifth nerve supplying the teeth and oral cavity. This gives rise, by reflex action, to a lesion of the skin, over an area supplied by another branch, of the same, or an associated nerve, distributed to some area of the face, or scalp. The second, that more complex one, of a toxic condition of the blood produced by absorption of micro-organisms, or their products, from unhealthy gums, as in the common complaint *pyorrhœa alveolaris*.

It has long been recognized that various forms of stomatitis, ulcers, and herpetic eruptions of the buccal mucous membrane, are often the reflex result of dental troubles, and the seat of the eruption is by no means necessarily contingent to the tooth giving rise to the complaint.

The following skin diseases may be, and I believe often are, produced locally about the head and neck, and certainly in many cases are kept up by dental causes, and very frequently owe their origin to a neglected state of the mouth: *Acne* (comedones), *acne rosacea*, *alopecia areata*, *eczema*, *erythema*, *herpes*, *œdema*, *seborrhœa* and *seborrhœic eczema*. In this list I have not included those very obvious external lesions, produced as the direct result of inflammatory mischief inside the mouth, such as *adenitis*, *lymphangitis*, *abscess*, *sinus* and resulting scars, *acute œdema*, *erysipelas*, and other acute inflammatory dermatoses.



A study of skin eruptions on one part of the body, as the result of an irritation of a neighbouring area, may in some cases be assisted, and in others complicated by, the following dermatological problems. In some subjects, a quite local eruption produced by a traumatism will be followed by a symmetrical lesion on the opposite side, or on some distant region of the body, which has not been exposed to a traumatism or irritation. For example, a dermatitis produced by a trade or trauma on one hand, may be, and often is, quickly followed by a similar lesion on the opposite side. So again, a traumatic dermatitis on one part will frequently rapidly spread for a considerable area to the adjacent skin regions, far beyond the seat of irritation. Further, a local irritation such as is produced, for instance, by pediculi or scabies on one part of the body, is frequently rapidly followed by an irritable skin eruption over regions far removed from the offending organisms, and long before the parasites have had an opportunity of spreading. *Pediculi capitis* may be the cause of a general irritable skin eruption over the whole body. Eruptions on the face of children are frequently caused by pediculi on the occipital region of the hairy scalp.

I wish to insist upon the peculiar reflex, or perhaps sympathetic, nervous skin phenomena illustrated by the above remarks, as showing what an extraordinary sensitive trophic condition of skin is present in many people, and how this complicates still more any attempt at making dogmatic statements, or drawing definite mathematical conclusions, as to the origin of a given skin lesion.

Before studying some of the diseases individually, and attempting to prove a connexion between them and the condition of the teeth, it is necessary to make some observations on the cutaneous nerve distribution of the region under discussion. The areas of nerve distribution to the skin of the head and face, however, are much more complicated than is ordinarily supposed. It is well known that tender areas of the skin, after the destruction of definite branches of the fifth nerve, often by no means correspond to the acknowledged distribution of the same branch of this nerve. So again, the position of headache in people suffering from errors of refraction may be on almost any part of the scalp. Some of the dental branches of the fifth nerve, however, according to Dr. Head, have a very definite reflex area of pain distribution, when they are irritated or inflamed. For example, pain from caries of the upper incisors is referred to the fronto-nasal area, and that from the two upper bicuspid, in some cases, to the maxillary area, in others to the temporal, but never to both regions in



the same subject. Again, in irritation of the nerves on the side of the tongue, pain is referred to the occipital region. Head also observes that there is an association between the tenth dorsal area and the occipital region of the scalp. There are numerous communications between the filaments of the cranial and those of the upper cervical nerves, which again are associated with the cervical sympathetic. There is also a well-known communication between the orbital branch of the superior maxillary division of the fifth nerve, and the lachrymal branch of the first division, which supplies the skin of the upper eyelid. Many areas of the scalp are supplied from two separate sources. Part of the temporal region, immediately above the ear, for instance, being supplied, both from the auriculo-temporal branch from the third division of the fifth nerve, and by the small occipital from the anterior branch of the second cervical nerve. There is also the association of distribution between the second division of the fifth and branches of the cervical plexus, and of the third division of the fifth, and by the primary divisions of the cervical plexus. The great auricular nerve which is formed by branches from the second and third cervical nerves has three divisions, each supplying a skin area of the face and scalp—the first, known as the mastoid branch, supplies the scalp behind the auricle; the second, or auricular, the external ear; and the third, or facial division, supplies the skin region over the parotid gland. So these areas are chiefly supplied from the cervical, and not from one of the cranial nerves at all. The exact areas of distribution are, however, very difficult to define, and there is no doubt that part, if not all of these areas are supplied by sensation from more than one nerve branch.

From these preliminary observations, it is seen that the regions of nerve distribution of the skin of the head and face are far more complicated than the superficial areas on most other parts of the body. It is thus seen how very difficult it is to localize with any very great scientific exactitude, the nerve distribution, or the probable result of reflex irritation of the same, on the skin areas of the head and neck. From this it follows, that to endeavour to determine the correlation between morbid conditions inside the mouth, with an unhealthy state of the skin, is one which meets with considerable difficulty. To state definitely that a given condition of a particular area inside the mouth will produce a sure and certain lesion of a definite skin area, is impossible in the present state of our knowledge. At the same time much may be gathered by a study of general principles, and this is one of the objects of this paper.



#### 4 Sibley: *Relation between the Teeth and Diseases of the Skin*

It is much easier to demonstrate the effect of irritation of certain filaments of the dental nerve, by the frequently observed reflex fibrillar contractions of some muscles supplied by the seventh or facial nerve, than it is to show the result of the irritation of the same filaments of the fifth nerve, on the trophic condition of the skin supplied by other branches of the same nerve. A toothache, or even nerve irritation, not sufficiently strong to amount to pain, will, in certain highly sensitive patients, produce a twitching of an eyelid, which will continue until the cause of the irritation is removed.

After these preliminary general remarks, I pass on to consider, under different headings, some of the skin diseases for discussion, commencing with the commonest disease met with by dermatologists at the present day—*Seborrhœa*, in all its various expressions of distribution, and variety of degrees of severity, from a slight dryness or scurfiness (dandruff) of the scalp, to a disfiguring eczematous eruption, spreading over the whole face and neck. A large number of these cases are associated with neglected dental caries, which I believe by reflex action sets up the irregular processes of the sebaceous and perhaps also of the sweat glands, and as long as the condition of the nerve irritation persists, all the more difficult will it be to deal with the seborrhœa satisfactorily. Chronic seborrhœa is by far the commonest direct cause of alopecia, both general and local. In some cases the hair of the scalp falls out fairly evenly all over, and a general thinning of the same results, which if unchecked ultimately leaves the patient more or less bald. Moreover, a seborrhœa of the scalp is frequently obstinate to treat, and shows a decided tendency to recur unless treatment be continued for weeks, or even months, after the region is apparently well. Seborrhœa of the face is more amenable to treatment. When, however, the condition has once become general the prognosis is most unfavourable for a complete cure, and hence the immense importance of seeing these cases in the earlier stages of the disease.

But the cases of *Alopecia Areata*, where patches of baldness occur in definite areas, are of greater interest. Dermatologists are divided into two schools as to the ætiology of this condition—those who believe in its parasitic origin, and those who hold it is entirely a neuropathic one. I have often considered that in some of these well-defined patches, both of alteration of the colour of the hair and of baldness, there was a connexion between the irritation of some branch of the dental nerve inside the mouth, and the nerve distribution of the patch of baldness on the face or scalp. In going into the history of cases of alopecia



areata both of the scalp and also of the beard, moustache or eyebrow, it is by no means an unusual thing to learn, that from a few days to a few weeks prior to the commencement of baldness, the patient had a severe attack of facial neuralgia due to a carious tooth. One frequently finds that an attack of neuralgia on the right side of the face, for example, is followed by a patch of baldness on this side, and so pain from a dental cause on the left side is followed by an area of alopecia of this side. The association is easily demonstrated when the bald patch appears on the face, especially when in the same region as where the pain was felt. The connexion, however, is more difficult to determine when the hair comes out on the scalp, and a region of circular or oval baldness reveals itself in this region. The commonest areas of the scalp for alopecia areata are the parietal and occipital regions, that is to say, just above and behind the external ear, and on the back of the scalp, usually near the median line. The former area is supplied chiefly by the posterior auricular or auriculo-temporal branch of the second division of the fifth nerve, and the latter area chiefly by the great occipital nerve, and also to a lesser extent by the smaller occipital nerve, both from the cervical region.

Jacquet, of Paris, has made a most convincing attempt to prove the association of dental troubles with baldness, and has almost succeeded in demonstrating the relation by mathematical exactness. He collected 273 cases of alopecia, and found that in 185 of these the condition manifested itself in the first twenty-five years of life, that is to say, corresponding to the period of the eruption of the teeth. Moreover, that very few of these cases occurred between the ages of 15 and 19, or that period when there is an *entr'acte* in the dental evolution. He sums up his observations by stating that in his opinion "alopecia is a trophic trouble, of which one of the most frequent pathological conditions consists in an irritation of one part of the buccal trigeminus, which is reflected to an area of minimum cutaneous nerve distribution, in anatomical correspondence with the spot irritated."

In discussing the relation between the condition of the teeth and the hair, there is always the interesting embryological connexion, which often throws light on certain unusual conditions. Developmental abnormalities of the teeth are sometimes associated with abnormalities in the formation or structure of the hair. There is also probably a degenerative relation between the two as well. Premature caries may be associated with premature changes in the hair, either in the loss of colour and commencing greyness, or in baldness showing itself earlier in life than is usually the case.



*Acne* and comedones, eruptions very common on the faces of adolescents, of both sexes, are often associated with dental troubles. Young people are more apt to neglect their teeth than those of more mature experience, and so it frequently happens that many of the worst cases of acne seen occur in subjects of severe dental derangements and neglected caries, producing a general state of oral sepsis. This condition probably acts both reflexly, in the irritation of the skin distribution of the fifth nerve, and also assisting the morbid process, not only by the absorption of septic bodies, but also from the resulting dyspepsia and constipation. It is therefore most important in treating these cases to insist on having the teeth properly attended to. There is no doubt a connexion between severe and persistent facial acne, and early and troublesome dental caries.

Another very common skin complaint, *Eczema*, is, I am sure, frequently associated with dental troubles. Teething is popularly considered as the cause *par excellence* of eczema in infancy and childhood. In a large number of cases there is no doubt a close relation between the digestive organs and eczema, a condition so frequently, not only in infants but also in adults, due to defective digestive processes, both of assimilation and of excretion, and often primarily traced to the teeth.

Probably there is no skin disease more directly and indirectly dependent upon the condition of the teeth than *Acne Rosacea*, that very common condition of redness of cheeks, nose, and chin accompanied by varying degrees of pustulation—a malady more common in women towards middle life, although also occurring in men, and often giving rise to a good deal of disfigurement in both, and not at all infrequently associated with defective dental conditions. I consider the first thing in all cases of rosacea, is to have the teeth thoroughly examined and treated. It is useless applying soothing lotions and ointments to the skin of the face, if an irritation is permitted to continue inside the mouth. If, on the other hand, the morbid condition of the teeth and gums is cured, a soothing lotion or ointment applied externally as a protection to the part from the changes of temperature, and other irritating climatic influences, will bring about a very considerable improvement of the complexion. Rosacea is often entirely the result of dyspeptic troubles, the origin of which is to be found in the mouth, either in the form of dental caries, deficient masticatory apparatus, or a pyorrhœa alveolaris, or a combination of all three causes. The red nose produced by acne rosacea, popularly considered to be a sign of



drinking habits in the individual, is now known to occur in a large number of most temperate people, including teetotallers themselves. In many cases the disturbance of the physiological action of the skin is the direct result of a pyorrhœa alveolaris, and after proper attention to the condition of the gums, the skin of the face gets well, and the complexion, together with the general health of the patient, rapidly improves. The dermatologist who treats the skin and leaves the condition of the mucous membrane uncared for, is certainly not doing justice to the immediate alleviation of the symptoms, and is only assisting the future troubles of the patient. As an example the following case illustrates my opinion:—

A single woman, aged 27, had suffered for some years from an acne rosacea, having, she stated, had a red nose from childhood. She had tried several treatments, with little or no improvement. On examination, I found she had several carious molars and bicuspidis in the upper jaw, and she had lost many of the teeth from the lower. I tried local treatment without success, and then sent her to a dental surgeon, who removed all the carious stumps and inserted new teeth in their place. The skin of the whole face soon rapidly improved and she is now free from acne, and the colour of the nose has resumed a normal appearance.

Temporary patches of *Erythema* appearing on one side of the face, on the cheek, or under the eye, are frequently due to dental causes. I saw a case recently of a middle-aged man, who for many months had had a mysterious patch of erythema suddenly appearing under his right eye, and lasting a few days and then disappearing, to reappear again a short time afterwards. This phenomena produced little or no discomfort, except the curious appearance it gave to his face, accompanied by a slight burning sensation. It quite disappeared after some carious teeth on this side had been attended to.

Most skin complaints commence as quite local conditions, and the face and scalp are certainly the commonest areas to be first affected. If the disease begins on the face, advice is usually sought; if, on the other hand, the scalp is the area primarily attacked, the condition, especially in men, may remain unobserved for a long period. A pathological state, at first purely local, will in a large majority of cases eventually spread, and may in time invade the whole body, and become a source of great annoyance to the patient, and one taxing all the skill of the dermatologist to deal with satisfactorily. A typical instance is a slight seborrhœa of the hairy scalp, at first consisting of an unnatural dryness of the area showing itself by a slight scurf or dandruff.



This may remain untreated for years, until the accompanying falling out of the hair, or some discomfort, or irritation of the scalp area, draws the attention of the patient to the malady. From this a seborrhœic eczema may extend over the forehead, on to the face, and down the back of the neck, to the trunk, and hence all over the body; and perhaps the whole process was started by neglect of the teeth and gums.

*Edema (Localized).*—Localized and diffused swellings of the skin of the face, neck, or of some area of the oral mucous membrane, are usually the result of some dental trouble, and occasionally give rise to difficulty in the diagnosis. The following case I saw some years ago may prove interesting:—

A girl, aged 16, had an attack of erysipelas of the head and face three months previously, and was confined to bed for three weeks. About this time she had a good deal of pain in one of the left upper molars, which was carious. About a fortnight after this, and two months before she presented herself at the hospital, her upper lip began to swell, and she had some slight pain in the left upper central incisor; this pain soon subsided, but the swelling of the lip had persisted ever since in spite of all treatment. There was at this time considerable, more or less solid œdema of the whole of the upper lip. The skin over it was shining and glossy, and the edge of the lip was considerably everted. There was some caries of the left upper central incisor, the rest of her front teeth were healthy. The carious incisor was removed on February 2, 1906, and by February 5 the œdema had nearly subsided, and a week later the lip was quite normal.

Having described some cases of skin diseases to illustrate my remarks, I pass on to make a few observations on some diseases of the mucous membrane of the mouth, also the direct result of dental troubles. These are: epithelioma, herpes, leucoplakia buccalis, lichen planus, ulcers (acute and chronic).

Ulceration of the oral mucous membrane produced by friction contact with a rough, or even only a rather prominent tooth is very common, and unless producing marked pain or considerable local discomfort, is often apt to be overlooked by the patient for a long time. Sometimes as the result of constant friction or pressure, together with slight erosions of some small area of mucous membrane, either on the side of the tongue, or of the buccal mucosa, continued for months or years, a thickening even amounting to a warty or papillomatous growth may ensue. This after a time becomes especially liable to ulceration and cancerous degeneration.

*Epithelioma* of the oral mucous membrane is usually the result of



local irritation by a tooth, not necessarily a carious one. I describe an interesting case I saw some years ago :—

A man with an early epitheliomatous ulcer round the base of an isolated prominent lower molar tooth had also a smaller ulcer of the same nature on the inside of the cheek, where this part of the mucous membrane came in contact with the crown of the same tooth. There was thus a considerable area of apparently quite healthy mucous membrane, in the region between the two ulcers, showing clearly two separate cancerous lesions, both produced, or their site determined, by the irritation of a tooth on a mucous membrane unusually susceptible to an epitheliomatous growth.

*Leucoplakia buccalis*.—Sharp, rough and decaying teeth are often considered a contributory cause of this condition, sometimes popularly known as smokers' patches of the mouth. The sites of election of the lesions are the inner surface of the cheek, in a line following that traced by the junction of the teeth of the upper and lower jaw when shut, and the gums above the upper canine and lateral incisors. I have no doubt that in the case of a chronic persistent patch of leucoplakia which is either in proximity to, or is brought into contact with the teeth in the movements of mastication, the wise course is to remove the tooth or teeth in question. Many years ago I showed before the North-West London Clinical Society, a case of leucoplakia in a man aged 34. This condition affected the centre and side of the tongue, and there was also a well-marked ridge of the same complaint on the buccal mucous membrane, corresponding to the line of junction of the molars, which in this patient were all particularly well preserved. The man had been a great smoker and probably had had syphilis.

*Lichen planus* in the mouth usually takes the form of flat papules aggregated on one or both sides of the cheek, the striæ running along the line of the buccal mucous membrane where the molar teeth come in contact, when the jaw is shut.

I have not described the clinical features of a number of dermatological cases to illustrate my remarks, but have only related briefly a few somewhat unusual, or to my mind particularly interesting, ones, which I have abstracted from my case-books. The majority of the patients I come across are cases of various forms of acne and seborrhœa, and present no individual features of interest, although collectively they form a strong argument in favour of the marked association of many of these morbid skin eruptions with dental trouble in some form or other. As long as the origin of the complaint which is inside the mouth is overlooked, so long will it be before a satisfactory result can



## 10 Sibley: *Relation between the Teeth and Diseases of the Skin*

possibly be obtained by the dermatologist's pharmacopœia. And it is this fact that I desire to emphasize, that in every case of a skin eruption on the face, the condition of the teeth and gums should be carefully examined, and if any even suspicious places be discovered, immediate treatment for this condition should be recommended. I should not rely entirely on lotions and ointments to eradicate or cure a condition of the skin area supplied by one branch of a nerve, and leave untreated an irritated or perhaps septic condition of another branch of the same, or an associated nerve.

I feel sure my remarks will bring to the memory of many of you interesting cases of skin eruptions, which may have long puzzled the doctor in charge, but which you have been able to cure by attention to the teeth.

Having described several of the diseases of the skin affecting local areas, that is to say, eruptions on the face, scalp and neck, due or in some degree connected with the condition of the dental apparatus, I propose before concluding, to make a few remarks, on more general skin eruptions, the result of absorption of deleterious bodies from unhealthy gums into the general system. I shall only just mention those somewhat rare cases of general septicæmic conditions produced by septic absorption from the mouth, and revealed by various septic erythematous rashes, such as hæmorrhagic purpura, or general diffuse furunculosis, and pass on to say something on the subject of pyorrhœa alveolaris, and the important part this disease plays in the production of skin eruptions, on parts of the body, often far removed from the regions of the head and neck.

A great number of apparently more or less different lesions of the skin are produced and kept up by gastro-intestinal disturbances; dental caries with pyorrhœa in the mouth is one of the most frequent causes of intestinal catarrh, fermentation, and general dyspeptic conditions. The pyorrhœa produces these symptoms in two ways: in the first place, the perpetual swallowing of small quantities of pus, contaminated with large numbers of septic organisms in time produces an unhealthy state of the gastro-intestinal tract and its contents. In the second place, the absorption into the system, of the products from the septic gums, produces a general lowering of the vitality and a condition of chronic septicæmia, with all its accompanying phenomena, and including under its heading many of the common forms of chronic diseases in the human race. Many cases of troublesome eczemas at all ages are due to gastro-intestinal causes. Urticaria invariably so. Many erythemas, again, are



traced directly to stomach derangements. Even psoriasis is considered by some dermatologists to be an external expression of the same internal troubles, and the most efficacious treatment is one which regulates the diet of the individual—in other words, the gastro-intestinal absorption.

This list of diseases might be considerably extended, and would of course include all those skin conditions which may occur in gouty or rheumatic patients, whose constitutional ailment is but the result of dyspeptic disturbances, the sequelæ of dental troubles, and so many of which owe their origin to unhealthy gums. Excluding skin diseases due to ecto-parasites, fungi, cocci, pediculi, and the like, a large number of people, and practically all hospital patients, except some very young subjects, are the unconscious victims of pyorrhœa in some degree or other. I am convinced that in many cases, to attempt to treat the skin complaint, and leave the gums untreated, is a very unscientific procedure. I am engaged in some research work in the Pathological Laboratory of the St. John's Hospital for Diseases of the Skin, where the Bacteriologist, Mr. W. Garner, has prepared for me some vaccines from a series of cases of skin diseases, in patients also the subjects of pyorrhœa alveolaris, and I have been treating these cases with hypodermic injections of vaccine. The method adopted for preparing the vaccine from the pyorrhœa of each case individually has been as follows: The gum in the neighbourhood of the pyorrhœa is well wiped over with a sterile swab, and all saliva and other contaminations from the mouth, as far as possible removed. Gentle pressure is then exerted on the gum, towards the root of the tooth, and a bead of pus pressed up from the socket; this pus is also removed with another swab; pressure is again exerted as before, if necessary rather deeper and firmer, until another bead of pus is forced up. A sterile platinum loop is then inserted into this fresh pus, and a culture tube of agar-agar or broth inoculated with it. As soon as a good growth has appeared on the agar, 4 c.c. of sterilized normal saline solution is poured into this test-tube, and the growth gently mixed up and stirred in this. This mixture is then poured into a fresh sterile test-tube and well shaken up with some beads, and then, if necessary, centrifugalized for a minute or so, to remove any clumps of growth which have not become finely divided up. A specimen film is then prepared with an opsonic pipette, containing two volumes of normal solution, one volume of standard blood, and one volume of the growth emulsion. These are all well mixed together, and a film made on a clean slide; after being dried and stained, a count is made, and a standard vaccine prepared, so that each cubic centimetre contains



## 12 Sibley: *Relation between the Teeth and Diseases of the Skin*

10 million or 100 million of organisms, according to the nature of the growth; the vaccine is then ready for use. An injection is given about every ten days, the dose being usually gradually increased according to the reaction obtained. Each case must, however, be treated on its merits, and no hard and fast rule can be laid down, either as to the most suitable dose of vaccine, or the length of period between the injections—in other words, every patient has his, or her, own individual peculiarities of reaction, which must be dealt with accordingly.

I will now describe one or two examples of vaccine injections:—

A case of erythema bullosum in a single woman, aged 31, who had never been seriously ill, and always considered herself strong and healthy. She had an erythematous eruption accompanied by superficial bullæ eight years previously, affecting the neck and face only. The condition lasted for three months and she recovered. The present attack had lasted for sixteen months when she first came under my observation on February 22 of this year. The eruption commenced on the back, then on the neck, and upper part of the chest, then the forearms, and afterwards the legs. All these regions were extensively covered by *erythematous* patches in various stages of bullous formation, and many areas of pigmentation, and some superficial scarring from previous lesions. The extremities were cold and somewhat cyanosed. There was no obvious cardiac lesion. There was considerable pyorrhœa alveolaris, affecting all the lower incisors, and the left first bicuspid. The growth obtained from the pus was a mixture of streptococci, staphylococci, and slender bacilli, and from this a vaccine was prepared of such a strength that 1 c.c. contained 10 million organisms. On March 2 an injection of 5 million was given, and the next day a fresh lesion appeared in the lumbar region, there not having been a new lesion for some time previously. On March 9 another 5 million were injected, and this was followed by a fresh lesion on the dorsum of the right foot. Other injections were given on March 20 (7 million) and March 30 (10 million); fresh lesions followed each injection. I also treated the pyorrhœa directly by short exposures to X-rays, and gave her an antiseptic mouth-wash, but no internal treatment was given. On April 13, as a control experiment, she had an injection of aqua destillata. She has remained free from fresh lesions since, so to-day she had 5 million vaccine organisms injected. The condition of the pyorrhœa has already considerably improved, and she continues well in herself.

A man, aged 44, had suffered for many months from very troublesome chronic urticaria all over the body, which was very rebellious to various treatments, and he also had some acne rosacea on the face. A considerable amount of pyorrhœa was present, affecting most of the teeth on the left side of his mouth, and the lower lateral incisor, and the canine on the right side. A pure streptococcus culture was obtained from the pus and a vaccine prepared; an injection of 5 million was given on March 9, on March 16, 10 million were injected, and on April 13, 5 million more.



On making bacteriological examinations of the pus from cases of pyorrhœa under the microscope, I have been struck by the presence in practically every case examined of spirochætæ, which in specimens prepared by the Chinese ink method are morphologically indistinguishable from the *Spirochæta pallida* found in so many syphilitic lesions, and considered by most authorities to be the specific organism of that disease. This spirochæte is present in addition in most cases to the one resembling the *Spirochæta refringens*. I am not prepared at present to say if these spirochætæ are anything more than accidental organisms in pyorrhœa.

In the majority of cases streptococci were present, in some staphylococci, and in some both, in addition to numerous other less easily defined organisms, but in the majority of the cases a pure streptococcus culture was obtained.

I have placed under the microscopes specimens of the spirochætæ found in pyorrhœa and in syphilis for your examination and comparison.

My sincere thanks are due to Dr. Serrell Cooke and Dr. T. Galbraith for their valuable help, and kind assistance with the vaccine treatments.

#### BIBLIOGRAPHY.

- DAUZATS. "Recherches sur la contagiosité de la Pelade," *Thèse de Paris*, 1901.  
DE LAVARENNE. *Presse méd.*, Par., 1902, x, p. 171.  
EYRE and PAYNE. *Proc. Roy. Soc. Med.*, 1910, iii (Odont. Sect.), pp. 29, 61.  
GOADBY. *Brit. Med. Journ.*, 1908, ii, p. 477.  
*Idem.* *Lancet*, 1911, i, p. 639.  
HEAD. *Brain*, 1894, xvii, p. 406.  
HUNTER, W. "Oral Sepsis," *Practitioner*, 1900, lxxv, p. 611.  
JACQUET. *Ann. de Derm. et Syph.*, Par., 1902, 4me sér., iii, p. 97.  
PEDLEY, R. D. *Trans. Odont. Soc.*, 1905, N.S., xxxviii, p. 67.  
SIBLEY, *Trans. Path. Soc. Lond.*, 1891, xlii, p. 381.  
*Idem.* "Stomatitis Neurotica Chronica," *Brit. Med. Journ.*, 1899, i, p. 900.  
TRÉMOLIÈRE. *Presse méd.*, Par., 1902, x, p. 567.  
TURNER, J. G. *Practitioner*, 1910, lxxxiv, p. 115.



## DISCUSSION.

Mr. JAMES asked Dr. Sibley in what way he definitely associated diseases of the skin with conditions arising in the mouth. The paper covered a very large area and it was rather difficult to follow at the moment exactly what Dr. Sibley was endeavouring to prove. There appeared to be three classes of cases—those which occurred by direct extension from the mouth, those due to reflex disturbance, and those due to gastro-intestinal disturbances. With regard to the first group, the speaker had seen cases in children which undoubtedly appeared to be of this nature. Of the second group it seemed possible that vascular changes and possibly trophic changes could occur which might favour a skin lesion, although this was hardly borne out by clinical experiences. The chief affections seemed to be those due to gastro-intestinal trouble, which might be the result of oral sepsis.

Mr. GABELL was very much in the same difficulty as Mr. James. It appeared to him that most of the cases described were nervous reflexes and not direct infections. He had seen acne rosacea as a mere extension in people who had pyorrhœa. Dr. Sibley described a great many cases of affections of the skin, found that the patients had pyorrhœa, and inferred that the pyorrhœa was the cause. But did Dr. Sibley realize the enormous number of people who had pyorrhœa—how very few had not got it? If he did, why did he attribute the skin affections to pyorrhœa? It did not seem to him a very sound argument. The treatment by vaccine was very interesting, but as Dr. Sibley appeared to leave the local condition untouched, he could not see very much hope of success. The first patient shown had violent pyorrhœa, and copious infection was still going on; it seemed hopeless to treat the case by mere vaccination.

Dr. KNOWSLEY SIBLEY, in reply, said that if, as the result of a dermatitis on some part of the body, produced by a local irritation after a short time, owing to a reflex or sympathetic irritation of the nerves of the skin, a similar lesion appeared on the opposite side, or even on some other region of the body, so he maintained, that when there was a violent nerve irritation, such as was produced in dentition, a nerve irritated by caries or other causes, it was explicable to get a skin lesion due to trophic changes of the nerves in the skin area, especially in the superficial areas supplied by the same or an associated nerve. The whole of the areas of the skin supplied by the other branches of the fifth nerve must be equally irritated. He had seen so many cases in which local treatment of the skin failed to cure, but which had been rapidly healed by treating the condition in the mouth. One case was that of a hospital nurse, who had for years been under treatment for the condition of the skin of her face, but until she had her teeth attended to there was no success from the treatment, and then she got perfectly well. Even the colour of her nose, which had been red since she was a girl, became normal. The other cause was septic absorption. A large number of skin diseases were proved to be gastro-intestinal in origin,



due to disturbances such as indigestion, rheumatism, the absorption of deleterious bodies from the intestines, &c. ; that is to say, the skin lesion was an external expression of an internal condition. The cause of indigestion in a large number of such patients was dental trouble, as caries, the absence of proper masticatory surfaces, or pyorrhœa. With regard to the hospital cases not having been treated locally, each patient had been told to see the dentist, and have his or her teeth attended to, but they simply would not go. Such people thought that if they did not have toothache they had nothing the matter with their teeth. The man he had shown with urticaria had been under treatment for a year, and although advised on several occasions to see the dentist he had never done so. Undoubtedly such cases should be treated locally, the teeth extracted or the tartar scraped, the pockets swabbed out, in addition to vaccines, but of course it would be very interesting to obtain improvement through vaccines without having the teeth treated at all. If the teeth were attended to locally, vaccines would very soon clear up whatever pyorrhœa happened to remain. The more cases he saw the more he was convinced that a large number of skin diseases were due to troubles in the mouth in one form or other. It was well known how sensitive the skin was, and a dermatitis in one spot might be repeated all over the body. Pediculi on a child's head might produce an eruption over the whole body. Exactly in the same way, irritation inside the mouth might produce trophic or sympathetic changes in the skin areas far beyond the region of the face.



