distinguish catarrhal pneumonia; for the present purpose, it is enough to recall the fact of their existence. Recovery being incomplete, inasmuch as the pneumonia is followed by paroxysms of dyspnoea, therefore, the inference is not unfounded, that permanent injury had been inflicted upon the lungs. The physical signs may be ambiguous, but their negative condition is no cogent proof that the injury is absent. Another serious consequence is that, after severe forms of the pneumonia, deformities of the spine and of the thorax invariably manifest themselves both in children and in adults. Doubtless, pre-existent rickets favour, in children, the origin of the pulmonary inflammation; but it is not the less certain that this may be, at all periods of life, the starting-point of changes in the capacity and in the shape of the chest. I have every reason to believe that, besides the mechanical element—collapse of the lungs and atmospheric pressure—nutritive disturbances in the bones themselves contribute towards them. The effect of these deformities upon the lungs of the growing child and of the grown up man will be readily understood. Hence it is of the utmost importance to prevent, especially in children and in feeble adults, the extension of the inflammation from the bronchi to the parenchyma of the lungs.

Now, catarrhal pneumonia occurs with the greatest frequency in crowded hospitals and ill-ventilated rooms, and at present the prevailing opinion is that it is mainly due to the weakness of the patient and to the aspiration of irritating matters from the larger into the smaller air-tubes. If that be so, I know of nothing more apt to produce pneumonia than the treatment adopted on the appearance of an inflammatory process in the air-passages. The patient is kept in bed, wrapped up in flannel, and, if possible, in cotton-wool, notwithstanding the high fever, by which he consumes himself. Doors and windows are tightly closed; every crevice capable of admitting air is stopped; the bronchitis kettle freely plies; and when the nervous system rebels against such ill-usage, then the cough is suppressed by narcotics or by chloroform, as in the whooping-cough of children. If the inflammation were to occupy a limb instead of a bronchus, I have no doubt that the most scrupulous antiseptic dressing would be applied; but because, as in the present case, the affected organ is hidden from sight, all and every precaution is neglected. It is unnecessary for the present to decide whether a particular fungus or any other irritant be the exciting cause of whooping-cough or of bronchitis; whatever it be, we have to deal with inflammation accompanied by exudation—a process in every way the same, whether it occurs on the surface of the bronchus or on that of the hand. The experience of modern surgery has abundantly shown the beneficial effect of pure air upon wounds, and the baneful consequences to them of a vitiated atmosphere. The open sore that festers and spreads in an ill-ventilated room, rapidly heals if exposed to the open air, even without antiseptic dressing. The experience of physicians tends in the same direction; yet the adoption of the most obvious hygienic measures is frustrated by the inordinate fear of cold. "Catching cold" is supposed to be the deadliest enemy to guard against, and the special cause of diseases of the lungs. It is, I am aware, a dangerous thing to touch prejudices, but I would only ask whether there is a shadow of reliable evidence that abstraction of heat—unless it be prolonged exposure to a temperature below freezing-point—has ever produced inflammation of any organ. I have no doubt the fear of a fancied danger, and the anxiety to avoid it, are productive of much mischief, inflicting in many instances injuries that cripple patients for life. I can only urge that, if henceforth catarrhal pneumonia is to be prevented, the first principle of treatment should be *non nocere*.

When asthma has declared itself, there are always pathological changes at the root of it, differing in nature and extent, but invariably exerting the same influence upon the functional activity of the lungs. The most constant amongst them are deformities of the spine and of the thorax, also presenting an almost infinite variety. Some patients exhibit, not only by the shape of their chests, but also by that of the head and the limbs, unmistakable traces of rickets, from which they suffered in childhood; in some, the thorax is relatively too narrow for their stature; in others, tall adults, the whole bony framework has retained childlike proportions; in others, there are curvatures and twistings of the spine in all directions, or depressions and projections of the sternum and the costal cartilages. In the obese the deformities are often not visible until, in the progress of the disease, emaciation has set in; but in many cases it will be found that if from the radius of the thorax be deducted the thickness of the layer of fat, and if its vertical diameter be measured, their chests are, whether deformed or not, relatively too small for their stature. A similar variety of changes exists in the lungs; there may be general atrophy and dilatation of the bronchioles, and of the air-vesicles—emphysema; or induration of the parenchyma, which, although lobular at the commencement, has invaded almost entire lobes, occasionally extending even to the mediastinum; there may be peribronchitis, with dilated bronchi, splenisation at one

place, emphysema at another, etc.; while the healthy portions of the lungs are always more or less in a state of congestion. Necessarily, the entire organism becomes involved in those changes. The right side of the heart is the first to suffer, and in due course there is marked stasis in all the systemic veins, affecting not only the skin and all the mucous membranes, but, occasionally to a marked extent, the thyroid gland and the kidneys.

It is the presence of these changes that constitutes the "relative insufficiency", as it were, of the lungs, and produces the increased susceptibility to exciting causes. It is to them that treatment is above all to be directed; and though they themselves are irremediable, yet much may be done to resist their progress, and to counteract their influence upon the healthy portions of the organ.

ON SCARIFICATION AS A NEW REMEDY IN SKIN-DISEASE.

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In few departments of medical science is the advantage of the modern system of specialisation more apparent than in the study of diseases of the skin. Under the old system, this large and important class fell entirely into the domain of the physician, and in consequence lotions and local remedies were alone applied, and on their failure cases were abandoned as incurable; but now that dermatology is being regarded as a specialty, surgical methods have also been used, one of which I am about to discuss.

My attention was first drawn, early in 1878, to a pamphlet by Mr. Balmanno Squire, published in 1876, on *Port-wine Mark, and its Obliteration without Scar*, advocating scarification as a new remedy. My sympathy was excited by his account of the universal failure of all the remedies hitherto applied to remove this prevalent deformity, and the confidence with which he recommended his method determined me to try it. His new plan was, shortly, to freeze by means of ether-spray the part in question, to scratch it in parallel lines with an ordinary cataract needle, and then to press a piece of blotting-paper firmly on it for five minutes. This operation was to be succeeded at intervals by series of oblique or transverse scratches, and, within a fortnight, the port-wine mark was, to quote Mr. Squire, "to vanish, as if charmed away by incantation, and the patient cured absolutely and certainly for the rest of his life." The seeming simplicity and promised efficiency of this method of treatment made me quite enthusiastic, and I determined to follow it out exactly; but my enthusiasm soon diminished when I discovered that the operation was not so easy to practise as it seemed to be from the description. To begin with, I found that, though on paper the reasons given by Mr. Squire for the use of ether-spray, namely, the absence of pain and bleeding, seemed incontrovertible, considerable difficulties arose out of its use, for the hardness induced by freezing made it impossible to scratch parallel lines at an eighth or one-sixteenth of an inch from each other. To check this difficulty, I had made for me a multiple scarificator, the numerous blades of which were fixed at the stipulated parallel interval; but, nevertheless, the extreme hardness of the skin, and the ice itself produced by the ether-spray, clogged the instrument, and made it practically useless, so that, after repeated failure, I continued to perform the operation without previously freezing the part.

It will, I think, be well here to describe three of the cases kindly sent to me by Mr. Jonathan Hutchinson for the express purpose of trying this new method.

CASE I.—Miss P., aged 28, was sent to me in the beginning of 1878 by Mr. Hutchinson, with her right forehead, cheek, neck, arm, and hand affected, and also with a large patch on the left cheek, which Mr. Hutchinson had repeatedly cauterised. It was a typical case of superficial capillary nævus, or port-wine mark. In no part was it raised above the level of the surrounding skin. I commenced by treating a patch of two inches by three on the right forehead, and one beneath the right eye, with every detail prescribed by Mr. Squire in his pamphlet, making the scratches every few days, and in different directions. I soon found the inconvenience of freezing, of which I have just spoken; and about the tenth time began operating without previously freezing the place, and with the new multiple scarificator, with great advantage. After the operation, the blood was soon stanchied by means of firm pressure with blotting-paper, and in two or three days there was no sign left of what had been done, while the patient suffered only from slight soreness of the affected part. The pain at the time of the operation was severe, but only lasted for a few moments after the bleeding ceased. I continued operating for upwards of a year, and used the method one hundred and thirty times, eighty times on the patch on the forehead,

and oftener on one below the eye, but with no further result than a small keloid growth, half an inch long, on the former. As regards the colour, my own impression led me to believe it was slightly paler, but from so constantly seeing the part I was really unable to judge correctly. At the end of the year, after the conclusion of my operations, I took the patient to Mr. Hutchinson, who, it will be remembered, had, previously to my attempt, cauterised the left cheek; he warmly congratulated me on my success on the left cheek, which I had not touched, but remarked that there seemed to be no improvement on the right side of the face, the part on which I had expended all my labours.

CASE II.—Miss F., aged 35, had been treated at the Skin Hospital, Blackfriars, for eczema of the leg, and was sent to me in April 1878 by Mr. Hutchinson to be treated for a port-wine mark, which spread in patches from the nose to the left ear. This case was rather different from the last in the character of the *nævus*. It was more raised, and darker or purple in colour; in fact, it was a venous *nævus*. Ten years previously, she had tried treatment by means of strong acid, but with no improvement. I operated on her thirty-two times in all, six times with ether-spray, and on five occasions applied tincture of iron after the scarification; but, as in the first case, with absolutely no alteration; so that the patient abandoned the method in disgust.

CASE III.—Miss H., aged 16, was sent to me by Mr. Hutchinson in July 1878, with a port-wine mark on the right half of the face. This *nævus* was more arterial in character than that described in Case II, but more raised than in Case I. I selected a small piece about the size of a crown, or rather larger, situated on the malar bone, and operated on it most thoroughly sixteen times, at intervals of a week; but, at the end of that time, the patient refused to go on, as there was not the slightest sign of improvement.

From these cases it will be seen that the operation, as recommended by Mr. Squire, in so far as port-wine marks are concerned, is practically a failure; and I shall not, I hope, be accused of hastiness in coming to this conclusion, when it is considered that I operated in the first case no fewer than one hundred and thirty times. I am sorry to be obliged only to record failures, or in any way disparage a treatment which in Mr. Squire's hands is so efficacious; but it is clearly our duty to publish results, whether they be favourable or not, in order that others who may be induced to try the method may be prevented from giving too positive a prognosis at the commencement of the treatment. However, I trust Mr. Squire may be able to give from his own experience some proofs of his success which will more than counterbalance the unsatisfactory results I have just described; and, at all events, I feel sure, now that attention has been directed to surgical interference, some effectual remedy will be developed for the cure of these unsightly deformities. For my own part, I am not surprised that the method fails in port-wine marks, when their structure is taken into consideration. The whole mass is composed of a minute network of vessels; these vessels divide into numerous branches, all of which unite, so that a complete anastomosis is formed. The consequence is that, when a clean incision is made in any part, the blood finds its way, in consequence of the inflammation, through the other vessels; but, as the wound heals rapidly by first intention, the continuity of the vessel or vessels is restored; the blood returns as before; and the result is, that the vessels in the line of the incision are not destroyed, and therefore there is no alteration in the colour on the surface.

Feeling that this was probably the explanation of the failure, I determined to try multiple linear scarification in cases where larger blood-vessels were apparent, and where the anastomosis was less complete. My first attempt was upon the severer form; that is to say, the later stage of *acne rosacea*. In this disease, the vessels are seen to stand out above the level of the skin, more especially those leading to the affected part. It will be remembered that Hebra recommends destruction of these larger vessels by means of a single scalpel, and the after-application of tincture of iron or nitrate of silver.

I will now give brief notes of three cases in which the treatment by multiple linear scarification was successful after all other means had failed.

CASE I.—J. M., aged 29, had been a lighterman, and from exposure to the weather had suffered for eight years from severe *acne rosacea* of the nose. Extremes of temperature caused him much pain, and eventually he had to adopt an indoor occupation. He was under care for two years and a half at the Blackfriars Skin Hospital, during this time using various remedies with little or no benefit. Last summer, through the courtesy of Mr. Tay, I began to treat the condition by scarification. I operated upon him in all twenty-six times, at intervals varying from a week to a fortnight or longer. After the first few operations, there was marked improvement; and when I last saw him, a short time since, the disease was practically cured; there were no vessels to be seen, no perceptible heat to the touch, no redness, and no pain from exposure to

heat or cold. As in the cases of port-wine mark, I dispensed with the use of ether, as the pain was comparatively slight, owing to the rapidity with which the operation was performed. There is no necessity to waste time in describing the various details of the operation; it will be sufficient for my purpose to say that it was done in a manner similar to what I have before mentioned, with the one exception that I encouraged bleeding, sometimes to the amount of one ounce or more. After it had stopped, the nose was carefully sponged with cold water, and the patient allowed to go home.

CASE II.—J. H., aged 23, also under Mr. Tay's care at the Blackfriars Hospital (to whom I am indebted for the opportunity of trying the treatment), a draper's assistant, had suffered from *acne* since sixteen; during the last two years, the nose had become considerably worse, both as regards size and colour. It was swollen and red, mostly at the tip, with large inflamed *acne* spots scattered here and there. There were dilated vessels around the spots. Mr. Tay expressed the opinion that *acne lupus* would probably be a better name than *acne rosacea*, in consequence of the severity of the disease in so young a person. I operated twelve or thirteen times, very thoroughly on each occasion—the result being a total disappearance of all redness. The *acne* spots were touched from time to time with acid nitrate of mercury.

CASE III.—C. F., aged 28, was sent to me by my friend Dr. Sangster, who has kindly furnished me with the following notes. She was a dressmaker by occupation, working twelve hours a day, much crippled by rickets. She menstruated first at fifteen, and had always been regular. She suffered from dyspepsia. When first seen, the nose was swollen and fiery red, except at the end, which was blue and cold to the touch. Congested capillaries could be seen. The redness extended along the cheeks to the angles of the mouth. The skin over the affected region was thick and papular. The above described condition commenced six or seven years ago as a flushing after meals. The disease improved somewhat under medicinal treatment, but the nose still remained red and swollen. I scarified ten times, on every occasion in a different direction. After the tenth operation, the nose resumed its normal size, and was pale in colour.

There is another disease similar in some respects to this severe stage of *acne rosacea*, *lupus erythematosus*, which I believe can be cured in many cases by the same treatment. I have, indeed, seen real improvement even in a short period effected by Dr. Besnier, at the St. Louis Hospital in Paris; and, though I myself am unable at present to record any complete successes, yet I hope to be able to do so at some future period.

It will be seen, from what I have said, that scarification deserves more notice, as a remedy in certain forms of skin-disease, than has yet been bestowed upon it. In so far as concerns the new application of it to port-wine marks, suggested by Mr. Squire, I have found it to be practically valueless, owing to the length of time required to produce any visible alteration or improvement; nevertheless, in the other diseases I have just mentioned, his system of multiple linear scarification shows an advance on the old method of operating with a single scalpel, advocated by Hebra and Volkman.

ON THE APPLICATION OF THE ELECTRO-MAGNET FOR THE CURE OF ANÆSTHESIA.

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SINCE the appearance of Professor Charcot's investigations on hystero-epilepsy, the electro-magnet has become a recognised therapeutic agent for cases of *anæsthesia* due to other causes than hysteria; and the important fact that the cure it effects in the non-hysterical forms is of permanent nature, is being verified by many independent observers. Its remarkable effects in *anæsthesia* due to lead-poisoning, and in *anæsthesia* due to organic cerebral lesions, have been the subject of separate publications by Debove, Proust, etc., in France; and in many of the Paris hospitals the electro-magnet forms an important item of the medical *armamentarium*. I am not aware that any observations on this subject have as yet appeared in the literature of this country;* and, with the view of drawing attention to this subject and inducing further trials, I beg to be allowed to give briefly the results of my own observations, especially as two of the three cases which I wish to relate are in themselves of rare occurrence and clinical interest.

* Since this was written, a case of hystero-epilepsy in which the electro-magnet was applied, has been reported by Dr. Stone in the *Medical Times and Gazette* July 14th, 1880.