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Rheumatism and Gout as Factors in the Causation of Eczema; and The Management of those Conditions.

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In all the range of diseases of the skin there is probably no one affection which is invested with more interest than eczema. This is owing in part, no doubt, to its great frequency, but much of this interest is also due to the fact that the disease is so universally spread. It is encountered in every portion of the globe and under the most varying circumstances. It spares no age, no condition and like syphilis it may be found in the babe at its mother's breast down to the tottering aged ready for the grave. The meanest hovel may give it shelter, or it may abide in the gilded saloons of the greatest palace. It is everywhere and the sufferings it entails are always the same.

In considering such facts, can it be wondered at that it should excite such a large amount of interest? Interest not only at the hands of the medical profession but in those who are the victims of this painful and distressing malady as well as in those whom the fear of contracting the dread affliction keeps in a constant tremor. To us as physicians the interest taken is of the highest moment inasmuch as the successful issue of any combat with this enemy depends largely upon the weapons we employ and these can alone be properly chosen by understanding not only the appearance, characteristics and habitat of that enemy but also the ground upon which the battle will be fought.

This brings us face to face with one of the most obscure of the many problems which confront us in medicine—that of etiology. The causation of a disease is, in many instances, a comparatively easy thing to establish; whereas, in other cases, it is well-nigh impossible. The animal organism is one continually undergoing permutations and combinations which it is impossible to foresee and predict and, as a natural consequence, all our deductions must necessarily savor more or less of the *post hoc ergo propter hoc* method. Real argument there is none. The rules of logic cannot be strictly applied so that it becomes necessary to place more or less reliance upon analogy, deductions from rather weak premises, and the results which are achieved.

As medicine advances great strides mark its progress, and it is more particularly in the domain of etiology that some of the greatest discoveries have been made. The whole science of bacteriology may almost be drawn upon as having furnished us with etiological factors whose undoubted influence has

been indubitably established by means of experimental work. But there are so many conditions not referable to such exact methods that the original difficulty remains in so far as these are directly concerned. It is for this reason and for others which I might cite, did time permit me, that I approach my subject with some hesitation.

I do not purpose speaking of the etiology of eczema. There are so many and such a variety of conditions which have been accused of being either directly or remotely the cause of eczema, that the mere enumeration of them would consume more time than I have at my disposal. The only phase which I desire to take under consideration is, in how far rheumatism and gout are concerned in the causation and prolongation of eczema, and what is the proper management of those conditions in order to derive the greatest benefit, so far as the cutaneous involvement is concerned. Naturally this implies that I am about to sustain the position that the conditions named are etiological factors, and such is probably the case. If we take the trouble to examine critically the history, condition, treatment and results in patients, a mass of evidence will have been found which, if it does not constitute absolute proof, bears so much weight with it that the probabilities would all tend to confirm and strengthen the position that rheumatism and gout prolong, intensify, and even cause eczema.

The Vienna School has, for the most part, always contended that eczema is of purely local origin, and yet its foremost exponents acknowledge the possibility of constitutional conditions acting as factors in the causation of what they are pleased to call *symptomatic eczema*. While this would seem to be a mere *petitio principii*, they have an argument which seems to be fair. They say that if, in certain individuals, the integument be irritated, eczema will supervene and protective measures will cause its disappearance. Yet, we all know that other individuals will not show the same effects following the same irritation. The only rational conclusion to be made is that there exists some predisposition to the trouble, in the individual; and, as this is far from explaining the true status of affairs, we must look farther and investigate more closely.

The French School, which claims to have quite a respectable following, has to a large extent attributed a certain portion of the cases of eczema to internal causes, or dyscrasiæ, which they have been pleased to name the "herpetic," or "dartrous" diathesis, giving as a principal factor for these the "arthritides." Much literature has emanated from the French masters in dermatology in support of this position, and, it appears, with some foundation in fact. The results which are claimed and which are governed by an adherence to principles based upon their hypothesis, seem to be as good as those of others.

The English School seems to be almost unanimous in regarding gout or the gouty diathesis as a marked factor in the production of eczema. Not only is this condition evoked as having a causative relation to the disease we are considering; but also in a host of others, of internal origin. Rheumatism is not often alluded to, but rheumatic gout is; so that, it is the gouty diathesis which is, on the whole, to be regarded as the causative factor in the production of a certain number of cases of eczema. There seems to exist no doubt whatever upon this point, as a reference to the works of British dermatologists will readily show.

In this country authors are much

divided upon the causal relations of rheumatism and gout to eczema. Some admit both; some but one or the other; others invoke an allied condition, the "rheumic"; and others again have distinctly asserted the existence of an "eczematous diathesis," which they have never been able to characterize with a distinctness sufficient to enable one to recognize it in the absence of cutaneous symptoms. This diversity of opinion is very natural when we take into consideration the fact that dermatology has just emerged from its swaddling clothes in this country and that its various exponents have had their views tinctured by the teachings which they received abroad. There are other factors also which exercise a certain amount of influence and these will be alluded to later on, but suffice it to say here that they are entirely dependent upon individual observation and experience.

An analysis of the reasons leading to the various opinions given by authors will disclose the fact that they are largely governed by the conditions in which they find their patients as well as by preconceived ideas, which they strengthen as much as possible, very often to the exclusion of facts. While it may be true, for instance, that rheumatism is as prevalent in Germany and Austria as elsewhere, and that cases recover without internal treatment we are not accurately informed as to the number who are not cured, the number who have frequent relapses, and the number who disappear from the observation of one to reappear under that of another individual. Nor do we possess accurate data as to the duration of treatment, nor as to whether internal treatment had no effect, this being impossible seeing that none is employed.

The French have swung to the other extreme of the pendulum and, although a slight reaction is now manifesting itself, the time has not been long past when all cutaneous affections were attributed to general or internal causes. Accordingly, patients were all placed upon general measures, in addition to whatever local methods might be adopted.

That the gouty diathesis should be made to play such a prominent part in the causation of disease, in England, is a matter that can be easily understood. When we take into consideration the fact that such a large proportion of Englishmen are the victims of gout in its protean forms, what could be more natural than to ascribe the origin of eczema to this cause, in a great number of cases? And when this opinion became apparently confirmed by the course and termination of the cutaneous trouble, it was the most obvious thing to regard it not only as possibly right, but correct beyond the shadow of a doubt.

Let us now examine this question in a logical manner. The first premise which we desire to lay down is that a condition which is generalized, which exerts an abnormal influence upon the system in general, will affect every organ and tissue to a greater or less extent. In the second place, every local condition which is not normal evidently attacks that part because, for some reason or other it is a *locus minoris resistentiæ*. As a corollary to this latter proposition it may be stated that, whatever tends to make the entire organism stronger and more able to resist outward influences proportionately acts in a beneficial manner upon the local part which is affected.

Again, it may be stated without fear of successful refutation that when a local condition, which is not normal, is found only in the presence of an abnormal general condition and disappears when it does, there must exist some in-

terdependence between the two. When the priority of existence or of appearance lies in the general condition, then it is not unreasonable to argue that it is the cause of the local manifestation, more especially when the same sequence is noted in the disappearance of both. These general propositions being granted, their particular application must be equally true.

While it is true that in particularizing general considerations are replaced by individual observation and experience, the principle originally laid down should hold good. The only possible source of error which might arise is the personal equation, and this has been observed in the most refined mathematical calculations. The only thing which can be done with this is to determine its quantity and make due allowance therefor. In so far as the subject of the influence of gout and rheumatism on the causation of eczema is concerned, not much need be said in addition to the preliminary statements which I have made. To begin with, the integument of individuals afflicted with either of these conditions is found to be in a peculiar condition. In fact, it is in such a state that external influences readily exert their baleful effects; and, in many cases, these effects may be observed without any knowledge of an appreciable external cause bringing them into being. If the skin be examined closely it will be found that it is flabby, that it has lost a considerable portion of its resiliency, and that the circulation in it is of a sluggish nature. If pressure be applied the color returns slowly and a small amount of depression is observed to continue for some time. The resistance is diminished and the underlying nerves seem not to be capable of bearing as much as in the normal state. The color is changed. Instead of the normal, there is a preponderance of the yellow shade and occasionally a deeper tinge due to the presence of variable quantities of pigment.

Direct external irritation is responded to by an erythema of a dark tinge which is more than transitory in character. In fact, it is this very erythema which is more than likely to develop into an eczematous eruption.

But in addition to this we note the appearance of an eruption which seems to be spontaneous in character and no possible examination, interrogation, or other method will show an external cause. We are confronted with the eczema and it must have some cause. We cannot take it for granted that every patient is ignorant, is unqualified to give evidence. This is the more especially true when in the course of our interrogatories we elicit the fact that there is some internal trouble present. That the patient is subject to rheumatism or gout and has had previous attacks attended each time by the same or similar cutaneous manifestations. In fact, the coincidence of the two is a matter observed by the patient and the most natural question coming from him is as to whether his general disease is not the cause of the local affection. If we take the pains to observe the case closely we will note that whenever an exacerbation of the general trouble takes place the local manifestation becomes aggravated. n some cases, notably in the old, the eczema assumes a chronic type and it is by no means uncommon to find old arthritics the subjects of chronic eczema.

I have found it to be quite frequent also to note the fact that an acid condition is present in eczematous patients. It occurs too frequently to be regarded as a coincidence. Moreover, a correction of this acid condition finds its good effects reflected in the ease with which the cutaneous trouble gives way to proper medication. Whether such cases

are inclined to rheumatism or gout it would be difficult to say; but, that an excess of acid is found in all of these conditions there is no opportunity of denying. For, if eczematous patients are interrogated in this respect a large proportion of them will speak of acid eructations, pyrosis, and other evidences of the condition. Hyper-acidity of the urine can be noted and the excess of uric acid is so marked in some that they will volunteer the information that reddish crusts accumulate on the sides of the vessels in which they void their urine. In a fair proportion there is complaint made of pains in the joints or muscles of a rheumatoid nature.

Taking all these facts into consideration, while the argument may savor largely of the *ad captandum*, the evidence is sufficiently strong to favor the view that there is a condition present, very much allied to gout and rheumatism; and adding to this its apparent action on the eruption, it is legitimate to conclude that it must have some bearing upon the cutaneous disorder.

In regard to the management of gout and rheumatism volumes have been written and equally good results have been claimed for different methods of treatment. To endeavor to give but a synopsis of the subject would be a herculean labor as it would in itself involve an inquiry into the pathology of these conditions. What I desire to do is to allude briefly to the alkaline method. I do not propose to consider external measures, but limit myself solely to the internal measures, of an alkaline nature, which are best adapted to effect a speedy restoration, and return to the normal condition so far as this is possible.

The different alkalies have all undergone probation and this examination of the relative value of each has not been confined to the laboratory; but, clinically as well, so that we are perforce obliged to place some degree of reliance upon the results which have been obtained. The question which the experimenter was forced to face, at the outset, was: which alkali is the best? The only method of solving this was by an inquiry as to which was the most effective and the most rapid. This was the question which was determined in the laboratory. I will not enter into any detailed description of this, but will briefly point out the conclusions which were derived after careful and exhaustive experimental inquiries.

The most powerful alkali to affect the solubility of uric acid is, beyond all doubt, lithia. The wrates of that alkali are the most soluble known and, on that account, a better elimination can be secured. Potash salts rank next in value in regard to their solvent value upon uric acid. The soda salts, while exercising a good influence, are not as valuable in this respect as either of the others; and the magnesia salts are the least effective.

According to the experiments of Prof. C. G. Mitcherlich, the potash salts, physiologically used, act more especially on the kidneys, inducing powerful diuresis; whereas, the soda salts influence the liver more. Dr. A. B. Garrod could find no particular physiological action attributable to lithia, beyond its powerful solvent action on uric acid. He states that soda salts when employed to any considerable extent have a tendency to favor an increase in the deposits of gout, thus rendering the original condition worse.

It is on account of the different therapeutic action of these various alkalies that much care and discrimination are to be exercised in their selection and application. It is perhaps not generally known that the effects of these alkaline salts is markedly increased when they are largely diluted in water,

and this opens up another requirement, *i. e.*, they must be freely soluble in order to obtain any benefit from their use. This it is which has given such repute to certain waters obtained at springs. While the quantity of alkali is really small the solution is perfect, and effected in such a considerable quantity of water that the full effect of whatever alkali may be present is obtained. If we were to add to the quantity of the alkali the effect would be proportionately increased in rapidity and efficiency. But this is a difficult matter to do. A patient will drink water and hesitate to add "medicine" to it. In the next place the quantity of alkali is not constant in natural mineral waters. If there has been a heavy rain-fall, the strength of the water is diminished; and, in seasons of drouth, it is quite notably increased. So that, taken altogether, the artificial water in which perfect solubility is obtained and which contains a fixed ratio of alkaline salts, in a pleasant aqueous vehicle is to be preferred. It is more advantageous because the quantity of alkali absorbed can be accurately gauged, and because the effects can be narrowly watched. There can be no doubt whatever, that in the case of lithia a water containing but two or three grains per imperial gallon, does not fill the conditions required. Either too much must be taken, or, under ordinary circumstances, a very slow effect or no appreciable action of the alkali is obtained.

A question of no mean importance is that concerning the solubility of the various alkaline salts. Chemical investigation has clearly demonstrated that the bicarbonates of lithia, potash, and soda, are not only the most soluble but the most easily assimilated by the animal organism. To prevent any decomposition it is only necessary to dissolve them in carbonated water, which not only keeps them in a soluble state but also adds to their palatability. It has the property of depriving them of their peculiar alkaline taste, and further, of preventing irritation of the gastric mucous membrane.

So far as efficiency is concerned it was proven by Dr. Garrod, long ago, that a combination of the bicarbonates of the three alkalies was the best all-round working formula, and could be found in the water which was obtained from the spring which is known as the Garrod Spa. As we are situated it is almost impossible to obtain it except at great expense, and an artificial reproduction of uniform composition is perhaps as good a substitute as we could possibly employ. Chemically it is the same thing even to the addition of the small quantity of sodium chloride which seems to add to the palatability of the water.

Dr. Enno Sander, of this city, has prepared his well-known lithia potash water, which fills all the indications required and which acts not only as an antirheumatic, antilithic, and antigouty mixture, but constitutes a grateful table water as well. It not only acts as a curative remedy, but, what is of still greater importance it is a reliable prophylactic. Its composition is as follows:

℞. Lithium bicarbonate.... gr. xiij.
Magnesium bicarbonate, gr. x.
Potassium bicarbonate.. gr. xvj.
Sodium chloride..... gr. x.
Carbonated water..... ℥ xvj.
M.

This quantity, one pint, should be taken daily, or the amount increased if deemed necessary.

Conditions occasionally arise in which it will be found that a mixture of salicylate of soda and bicarbonate of soda will effect the happiest results in rheumatism, and occasionally in gout.

Given in carbonated water the administration is made pleasant, and the mixture has an effect upon the patient which is refreshing at the time it is taken, and which effects beneficial results in a very short time.

When eczema is present the proper local remedies should be made, and it is astonishing how their action will be accentuated by the internal use of the alkalies as indicated above. *Experientia docet* is the only argument that can be brought to bear upon the question. When results, that are successful in certain cases, follow certain lines of treatment it is but natural to pursue such lines until something better, more rapid, safer, and more pleasant is shown to exist. Then, and not till then, should a method be discarded or condemned. Theoretical considerations may be pleasant as an intellectual exercise, but practical results are what is demanded in the treatment of morbid conditions.

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