

some cutaneous diseases are strictly confined to the structure involved and have no other than a local significance, there are many in which the skin lesions must be regarded as being merely one set of a series of symptoms due to some special or general cause having its seat in other structures as well as in the integument. The part that the nervous system plays in the production of varied diseases of the skin is, I am firmly convinced, immense. While its power and influence as a factor is well understood to-day, owing largely to the special writings of such observers as Eulenberg and Guttman, Bulkley, E. Long, Fox, Crocker, Schwimmer, Kopp and many others, I am of the opinion that its influence over the skin is at present far from being properly recognized. The nerves are avenues by which a multitude of diverse influences reach the skin. The future will, I feel sure, see this particular subject much more elaborated than it is to-day.

ERYTHEMA EXFOLIATIVUM RECURRENS.

Read in the Section on Dermatology and Syphilography, at the Forty-fourth Annual Meeting of the American Medical Association.

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The erythemata have always possessed a large amount of interest for dermatologists, and the numerous apparently aberrant forms which have been observed in late years have invested the subject with an amount of importance which was not conceded to it heretofore. It is more particularly in regard to the etiology of the different forms that research has been made. In addition to this there have been presented certain forms which have excited much interest on account of their assumed rarity, but which are, possibly, not so infrequent either on account of mistakes in diagnosis, or ignorance of this pseudorarity, or an indifference to making any record. These circumstances, singly or combined, have conspired to produce an impression in many instances that a certain condition or group of symptoms was rare, when in reality it was common and had either escaped attention or failed to arouse any interest, under the mistaken idea that it was so well known as not to deserve even a passing mention. Under these circumstances, every new record helps to swell the list and without detracting from the credit of those who first noted the matter, it contributes to a vulgarization of a certain amount of knowledge which should come within the grasp of every one. It is for this reason that I wish to place upon record a condition which is an apparently unusual one, but which in my opinion is observed much more frequently than medical literature would lead us to suppose. I refer to intermittent scarlatiniform erythema or erythema exfoliativum recurrens. Medical literature, up to the present, seems to be rather meager, so far as the number of accounts of this trouble is concerned. A hasty search through current medical literature and works on dermatology has yielded but small results and larger returns will have to be left to the future.

Before entering into any farther considerations upon the subject, I will give the history of a case as furnished by Dr. Edward C. Bennett, under whose care it occurred, and to whom I am indebted, not only for the anamnesis but for the specimens which are figured, as well. I am desirous of returning my thanks to him for this, as he kindly conferred with me

regarding the case which he very justly considered an unusual one.

In order that a more complete record of the disease under consideration may be made, I will append condensed histories of other cases which have recently appeared in print, in order that a more easy reference may be made and the points of similarity, both from a clinical and etiological point of view may be made more apparent, and thus enable the reader to follow the reflections deduced, with greater facility.

The cases which I propose giving do not by any means include all those which have been reported, but they are sufficiently numerous to give a general idea of the characteristics of the disease, as well as to give a certain amount of information in regard to the clinical peculiarities of the process, and thus afford an opportunity of drawing some conclusions in regard to the etiology of the process. In addition to this, it affords us almost a certainty in deducing conclusions as to its comparative frequency. If we are to judge from the number of cases which have recently appeared in current medical literature, we would be led to the conclusion that the trouble while not frequent is far from being unique or even rare.

With these few prefatory remarks, I will proceed to give a brief résumé of a few cases which have recently been described and then make a brief analysis of them:

Case 1.—(J. Frank, M.D. and W. C. Sandford, M.D., in the *American Journal of Medical Sciences*, August, 1891.) John H. P., miner, 34 years of age, well-built and healthy. Skin is perfectly normal. His parents are living as also maternal grandmother; is the second of a family of thirteen, all of whom are living. On July 24, following his birth (Dec. 29, 1857) he was suddenly taken ill, vomited and in a few hours the entire surface of the body was scarlet red. The symptoms subsided in a few hours, but on the fourth or fifth day following the attack the entire cuticle was cast off, and a few days later the nails of his hands and feet were also shed. This was repeated every year on the same date. The patient first remembers the shedding in 1865 and he states that these attacks occur each year on July 24, usually at 3 p.m. and never later than 9 p.m. The paroxysm begins abruptly. Patient has a feeling of lassitude and weakness of fifteen to twenty minutes duration, followed by muscular tremors, nausea and vomiting, a rapid rise of temperature, skin and mucous membrane of tongue and mouth become red and inflamed, and are hot and dry. No perspiration appears after the paroxysm begins until the cuticle is cast off. The patient has been delirious three times during these attacks, once for nine days. In his early life the cuticle began to shed on the second or third day after symptoms appeared, and was complete by the fifth day; but each succeeding year it takes a little longer, until now it is ten or twelve days before shedding is complete. The cuticle can be detached in large sheets, and from the hands and feet in the form of gloves and moccasins. The nails are loosened and crowded off in about four weeks after the acute stage.

Here follows a detailed account of the attack:

Vomiting took place, the erythema extending visibly. Pulse 68; temperature 97 degrees. The highest pulse noted and temperature observed during the attack were 92 and 103 degrees respectively. July 26, two days after the beginning of the attack, the skin appeared normal, the temperature having returned to the normal. July 27 the epithelium of tongue and mouth came away. July 28, perspiration was free on forehead and under eyes. The cuticle on chest was raised in the form of blisters by the perspiration. Desquamation then set in and continued until August 11, when the left moccasin was removed. After the removal of the cuticle the skin was very soft and delicate; and where the former was normally thick, the new skin was very sensitive. August 26, the nails of the little finger and second finger of right hand were shed. September 2 those of the little finger, second and third fingers of the left hand were retracted. Both thumb nails removed September 5; and the nails from

the big toes which were the last to come off, on September 8. The other nails were cast off in pieces while patient was at work, so that the exact dates could not be noted.

The above is certainly unique in one respect—the recurrence of the trouble on exactly the same day of

desquamation which occurs, through this graphic representation, than mere words could convey. As may be seen we have presented a picture of the patient desquamating and one of the portions of exfoliated epidermis which were secured.

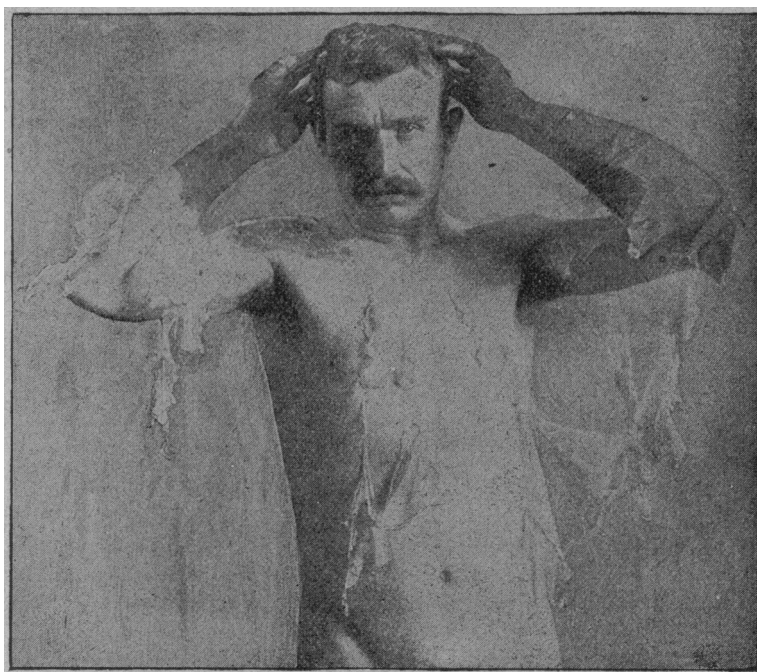


Fig. 1. Dr. Frank's case of erythema exfoliativum recurrens.

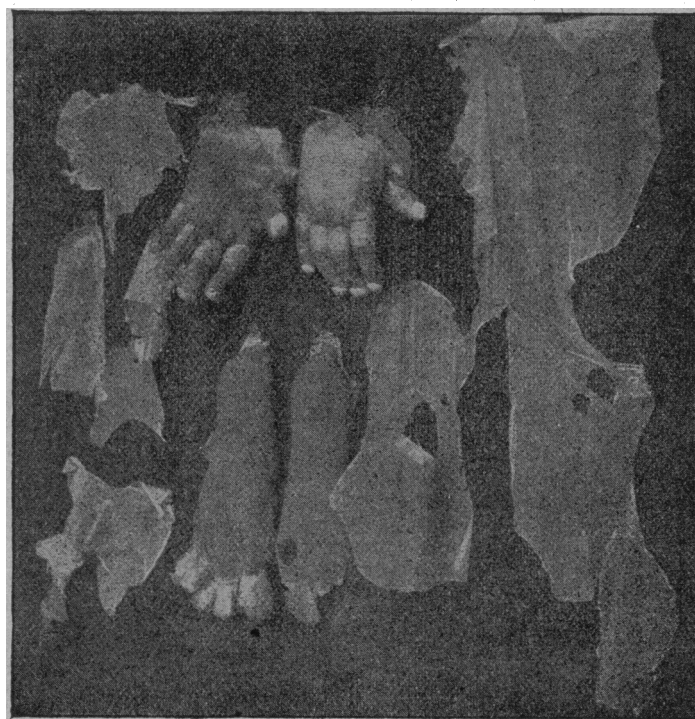


Fig. 2. Epidermis shed in Dr. Frank's case.

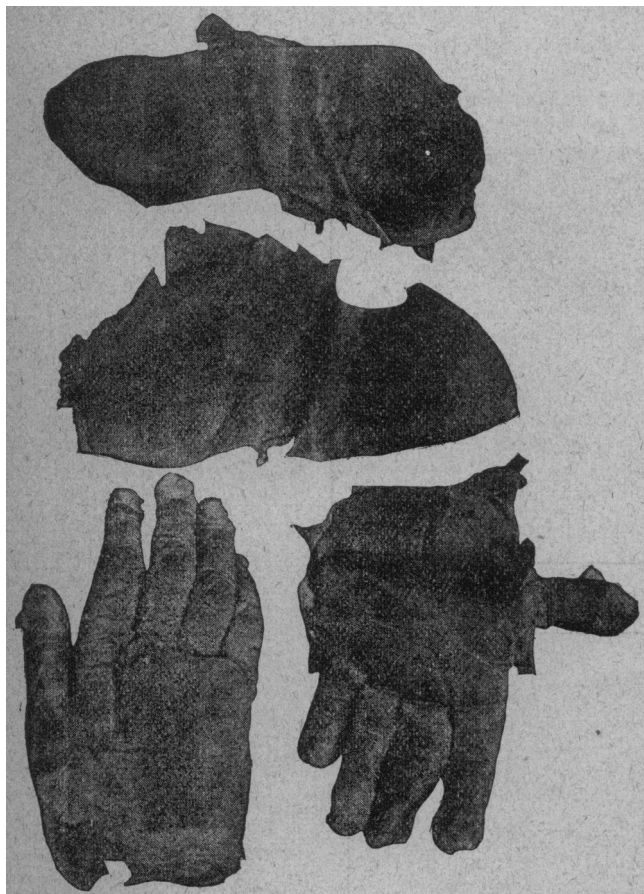
the year for so many years in succession. It is certainly deserving of more than passing attention for this reason.

Through the kind permission of Messrs. Lea Brothers & Co. of Philadelphia, I am able to present the illustrations occurring in Dr. Frank's excellent paper. A much better idea may be gained of the

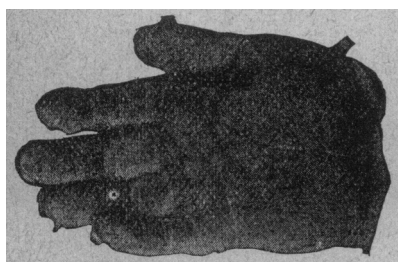
Case 2.—(Henry William Blanc, B. S., M.D., *International Clinics*, October, 1891.) J. C., white, male of 23, whose occupation was cotton scoreman. Both parents living and in good health. Three brothers and two sisters living and in good health. When 10 years of age he was treated for what was called scarlet fever, which lasted several weeks, leaving him perfectly well after desquamation. The following spring all the symptoms of scarlatina reappeared. From this time until 1884 he had two attacks annually. In 1884

he had none. Latterly the attacks have been irregular, although generally appearing twice a year. The intensity of the fever and eruption has been growing milder and the desquamation more marked. On several occasions all the finger nails have fallen off.

The attack begins by a feeling of malaise followed by a fever lasting forty-eight hours. The rash appearing on the second or third day, lasts about four days. Paroxysms of itching occur during this time. The skin dries up and for-mication is present. An attack lasts about five weeks, although when the nails are shed it occupies one month longer.



Epidermis shed from hands and soles of Dr. Blanc's case. The only rupture of the gloves occurred when the hands were withdrawn.



Epidermic glove removed almost complete from Dr. Blanc's case of erythema exfoliativum recurrens.
Fig. 3 and Fig. 4.

In the description of an attack we do not find nausea mentioned. There existed constipation, however. The highest temperature recorded is 102 degrees; pulse 85. Patient feels nervous as eruption is spreading over body.

When the patient was peeling in large flakes, the skin was noted to be dry and in some places raised like a blister, but containing no water beneath. The new skin was very tender. Patient stated that each

time he desquamated all of his freckles passed off. The patient complained of a cold sensation and very tender surface when desquamation had set in, and he declared that when the skin first began to crack he had had a chilly feeling lasting four or five hours.

Through the courtesy of the J. B. Lippincott Co. of Philadelphia, I am enabled to present a plate illustrative of the gloves and moccasins shed by this patient. As will be seen the gloves are complete with the exception of those portions which were adherent to the nails. The soles, only, of the moccasins are presented as the sides were torn into small pieces by the shoes of the patient. He also stated that he ordinarily wore gloves during the period of desquamation of his hands.

Case 3.—(Henry William Blanc, B.S., M.D., *International Clinics*, October, 1891.) Mrs. S., aged 21 years. In 1883, when 13 years old, she had an attack of scarlatina lasting about eight weeks. She was well until 1885, when she had a second attack of scarlatina lasting about six weeks. Nothing especially noticeable was observed in the second attack, except that the desquamation was excessive. In October, 1889, a scarlet rash similar to the others appeared, unaccompanied by fever. It remained two or three days and disappeared, followed by profuse desquamation which lasted from five to eight weeks, the epidermis peeling in large flakes. During the intervals between these attacks her health was very good, menstruation being regular and painless.

In March, 1890, she was married, and during the next month another athermal rash appeared. It was not very deep except on the hands and feet. A large amount of desquamation followed. In January and February, 1891, she had the rash followed by peeling of the epidermis. She had borne a baby during the preceding month of December, and during her attacks she nursed the baby regularly without communicating the disease.

There existed hyperesthesia of the skin when seen during the desquamation of the February attack. The skin had a slightly transparent appearance suggesting anemia. On the neck, forearms and legs the skin was dry and scaly, peeling easily when rubbed. The patient stated that immediately following the rash there was diminished sensation, which became transformed to hyperesthesia when the desquamation occurred.

Five weeks after this examination the patient contracted a severe cold, and the next day had a burning sensation in the fingers, palms of the hands, toes, back, throat, tongue and eyes. These parts were fiery red. This was another attack.

No history of vomiting or nausea is given.

Case 4.—(Case of Dr. W. T. Bolton, reported by Henry William Blanc, B.S., M.D., in *Journal of Cutaneous and Genito-Urinary Diseases*, January, 1893.) Maggie P., age 20, while perspiring freely had perspiration suddenly checked, May 6, 1892. Had nausea and vomiting with pains in back and limbs. Was given a purgative. May 9 the temperature was 99.6, pulse 104, nausea and vomiting. Dizziness and pain present. Skin of face swollen. Face, neck and upper part of chest erythematous. Patient stated that she had had a similar eruption in February, 1890, and in August, 1891. May 10, 1892, the rash had extended over whole surface of body. On next day epidermis of upper eyelids beginning to desquamate. On May 12 the mucous membrane of roof of mouth exfoliated in a solid mass. On that and the two following days the epidermis of the entire body was thrown off. The epidermis of the hands and feet came off without a break. The nails were loose but did not come off.

May 31, twenty-five days after the beginning of the last attack, she was again attacked in a similar way, the symptoms being milder. June 4 the exfoliation occurred.

The nails of the fingers and toes fell off after the first attack, and also after the two previous ones.

Therapeutic interference was very little. One dose of quinin and phenacetin, two grains and a half of each, was given in the course of the disease, and several times the skin was anointed with vaselin and quinin.

None of the relatives of the patient has ever suffered from a similar condition. The first time it occurred the patient supposed that she had scarlet

fever. A fact observed was the low pulse rate and comparatively small febrile reaction.

It will be observed that in the three preceding cases, a particular note is made of the fact that the parents were healthy persons who never suffered from any similar trouble. In fact, this seems to be noted in all the cases observed.

Case 5.—(Personal. Case seen through the courtesy of Dr. Edward C. Bennett. Unpublished.) Mrs. A., a brunette of medium height and weight, 26 years of age, has always enjoyed fair health. She has one child and has had one miscarriage, since which time her menstruation has been irregular and painful. In September, 1891, she became ill, the symptoms being ushered in with nausea and vomiting, high fever and pain distributed over the entire body. On the succeeding day there appeared an eruption which extended over and involved the entire cutaneous envelope with the exception of the face and neck. The eruption was an erythema accompanied by intense itching. The third day after the skin assumed an appearance suggestive of edema, being clear and apparently puffed up. It began to crack and separate from the body, i.e., the horny layer of the epidermis began to exfoliate. The patient removed this exfoliated epithelium from her hands and feet entire, in the form of gloves and moccasins. She also removed long strips from her trunk, arms and legs. There was desquamation of every part of the body with the exception of the scalp and face, in which there was no change whatever. The nails were not shed, nor was there any falling out of the hair discoverable in any portion. When the desquamation had arrived at an end, the exposed new skin was intensely red in color and glazed-like in appearance. In addition to this there existed marked pruritus. In about one week from the onset of the attack the affected epidermis had returned to its normal state both objectively and subjectively.

In June, 1892, Mrs. A. had another attack which was in every respect an exact counterpart of the one which has just been detailed, the onset being the same, and the various periods intervening between the different conditions being of the same duration.

Dec. 15, 1892, was the date of a third similar attack, with this exception, however—the patient was suffering at the time with typhoid fever.

So far as the treatment employed is concerned, it may be well to state that it always consisted in the administration of the following, which seemed to act efficiently:

R. Quinin sulphatis gr. iij.
Pulv. capsici gr. $\frac{1}{4}$.
M. Ft. tal. dos. q. s.
Sig. One such dose every three hours.

The symptoms of the case were always strikingly malarial, and on this account the quinin was administered.

For the condition of the skin which succeeded the desquamation, the following ointment was ordered with complete success, as it proved efficient in relieving the sensitiveness of the denuded integument and caused a disappearance of the pruritus, besides acting as an efficient protective during the complete restoration to the normal of the horny layer:

R. Campho-phenique $\overline{3j}$.
Albolene (solid) $\overline{3ij}$.
M. Ft. ungt.

A few points which have been noted by the patient and to which she has drawn attention are the following: Each attack of desquamation comes on just one week before the menstrual flow. Her attention was called to this circumstance by the fact that it occurred each time in that manner, and it can hardly be looked upon as a coincidence. She further states that after taking an ordinary dose of quinin, she experiences a prickling, tingling pain in the skin of the thumb. On this account she is inclined to believe that the general desquamation is due to the remedy, but it is evidently a *non sequitur*.

The plate illustrates portions of the exfoliated epidermis obtained at two different periods. The upper one, which is nearly a perfect glove, was removed in June, 1892, but little care being taken. The lower figure is a representation of the epidermis of the palm which was removed in December, 1892. There was no intention of preserving this, which accounts for its rather ragged and incomplete appearance. However, the two are good examples of the manner in which the desquamation occurs—*en bloc* and distinctively separate from examples of furfuraceous or large squamous exfoliation.

The above cases are given without making any attempts to resuscitate more or less doubtful analogous cases from literature. The present ones are

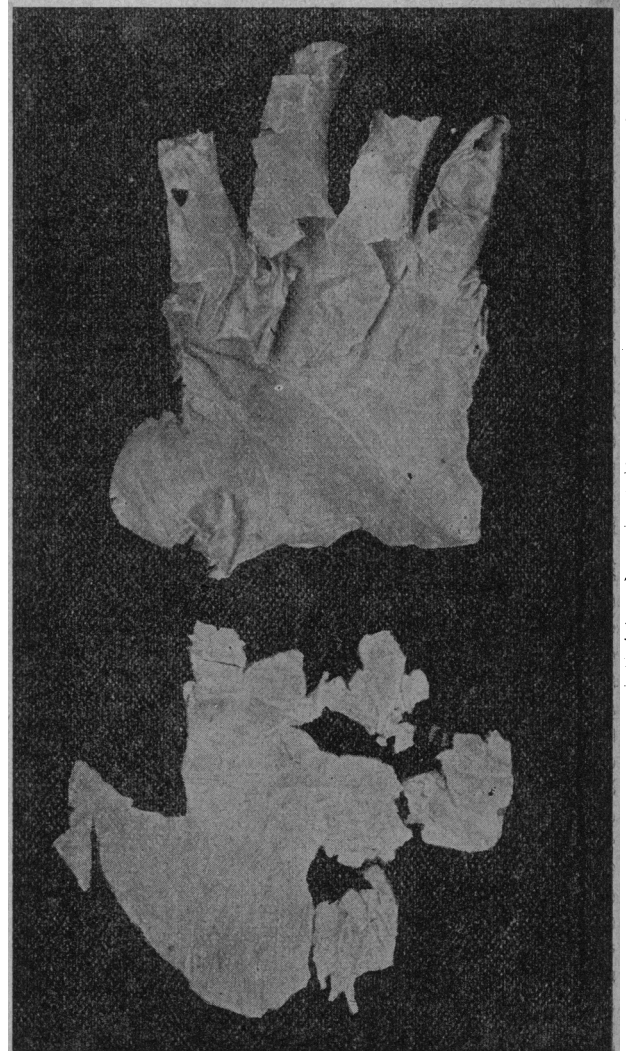


Fig. 5. Epidermis shed in author's case.

distinctly marked out, and have been described without much inclination to fit them to any particular pathologic view. Besides this, they have occurred within a very few years of the present day, and under the light of a more extended knowledge of dermatology, thus avoiding their being labeled with names which are not only inappropriate but absolutely misleading. For there is no doubt, whatever, in my mind, that the various desquamative erythemas have led to a great confusion of terms; not to mention the almost impenetrable chaos which has been occasioned by the mixing up of these various affections with the dermatites having analogous characteristics and yet

wholly distinct in many respects. These distinctions are not wholly etiologic in character nor is it an absolute necessity to make anatomo-pathologic studies to establish them. Close attention to clinical details will suffice to accomplish the task, as well as to clearly distinguish from each other the various processes which are incidental to the problem. It is for this reason that I propose to discuss, primarily, whether the disease before us is a dermatitis or an erythema.

To begin with, I desire to speak of the clinical characteristics of the two processes, before examining into the pathologic anatomy of the conditions. So far as observation can teach us, an erythema is always a transitory condition, in so far as it remains in *statu quo*. Its natural termination is embodied in a retrograde metamorphosis eventually leading to the normal condition. Moreover, there is no destruction of tissue, properly speaking, but merely the loss of such epithelial formations as are superficial and which are susceptible of degeneration, without the necessity of the formation of substitutive fibrous formations, such as are ordinarily denominated under the name of cicatricial tissues. In the case of inflammation, we find that the process is entirely distinct. In the inflammatory process the changes are not limited to the superficial structures, but they encroach upon the deeper formations and, as a result, we have their involvement manifested by a perceptible thickening which is a characteristic of the change. Destruction of a more or less limited extent goes on and in the reparative stage the loss of tissue is made up by a substitutive formation which does not always share in the nature of the tissues which formerly existed.

So far as the skin is concerned, we find that erythema is characterized by an increased vascularity of the epidermis, chiefly, although the cerium may participate in the exaggerated circulation. The process is essentially an angio-neurotic one, and may manifest itself in a generalized or a circumscribed form attended or not with edema, and certain subjective sensations. The lesions, however, which are present are almost entirely included within the limits of increased vascularity, and the presence of various and varied subjective sensations. The most prominent symptoms are superficial in character as well as in their limitations, and the culmination of severe forms is manifested in desquamation which may vary in intensity from a furfuraceous type to a separation of the horny layer in large sheets. In inflammation we are confronted with an entirely different history and appearance. We find that a prominent subjective symptom is pain of a deep-seated character. There is also a susceptibility to an aggravation of the condition manifested by lesions of a more or less destructive character, supuration being a not infrequent accompaniment and necessarily including in its development more or less destruction of tissue which is objectively manifest. It may be stated, however, that true inflammations of the skin exist wherein we do not have any clinical manifestations beyond a marked hyperemia and abundant desquamation. But it should not be forgotten that, in such cases, there is more than such a superficial survey would indicate. We have clinical evidence of the deep nature of the process shown by the thickening of the skin. Not only this, but there are general symptoms which are also indicative of

the graver character of the malady. The chronicity of the process itself is an indication pointing to its inflammatory nature and the general disturbance, so often noticeable, is of such a character as to determine the existence of more than a superficial process. It will be found in this connection that in erythemata the general symptoms are of an acute character, oftentimes quite marked, yet of a comparatively transitory nature as a whole. In inflammations, on the other hand, they are not of so acute a character, but are more lasting; and it is this very element of persistence which exercises so patent an effect in the production of inflammatory changes in the integument.

I will not weary you with the recital of examples in illustration of the few generalizations I have presented, but will enter upon a particular reference to the cases I have hastily summarized, in order to justify the opinion that they should properly be included under the erythematous diseases, in preference to the exudative or inflammatory, and that the name which has been proposed for this unusual process is one which is proper and distinctive.

We find, upon examining the records of these cases that the scarlatiniform eruption which preceded the desquamation spread with great rapidity resembling very much, in this respect, the erythematous processes occasioned by the ingestion of particular remedies in certain individuals. Another peculiarity attendant upon this generalization of the hyperemia, is the fact that it suddenly stopped short at a particular point, when the process of retrogression seemed to take place immediately. These are certainly not the usual marks of an inflammatory process, such as we ordinarily observe. For it must not be forgotten that the desquamation which is so abundant in the disturbance with which we are dealing, is rather a result of the process than a part of it. In the same manner, the exposed epidermal tissues are the objective indications of a loss of a certain portion of substance due to the sudden hyperemia causing an exfoliation of the horny layer, and thus leading to the condition observed. If we take any marked dermatitis or inflammatory condition of the skin, no doubt whatever can exist as to the complete difference existing between it and the process under consideration; and an inquiry into the pathologic anatomy of each one will completely establish the fundamental characteristics of each in such a manner as to leave no room whatever for any reasonable doubt as to the proper position to be assigned to the trouble I have described.

Dermatitis is a term which has been much abused in dermatologic nomenclature, and it has been the cause of leading many into errors which they would never have adopted had another word been used. Thus we find the generic appellation of "dermatitis medicamentosa" applied to a series of cutaneous phenomena having in common a similar causation, but frequently differing widely in the manifestations which are presented. The majority, I might say, are erythematous in nature and the homely expression of "medicinal rashes" is rather more close to the mark if not as elegant in diction. Another error which has led to a misconception of proper terms is the erroneous idea that desquamation is necessarily a result of inflammation, than which no greater mistake could be made. In the particular case in point, a further source of error would be

furnished by the observation of cases of dermatitis exfoliation or of pityriasis rubra, which to the superficial observer present many points in common with erythema exfoliativum; although an accurate observer would certainly be able to see so many distinctive characters as to almost draw the line of demarkation with sufficient sharpness to make it patent even to one not trained in the observation of diseases of the skin. I will now briefly consider the pathologic anatomy of the two conditions, as it will contribute in no small degree in throwing light upon the question before us.

The microscopic anatomy of a typical pathologic dermatitis and of an exfoliative erythema will serve better, perhaps, to explain the difference in the clinical pictures presented. I have chosen as illustrative examples two conditions which are sufficiently

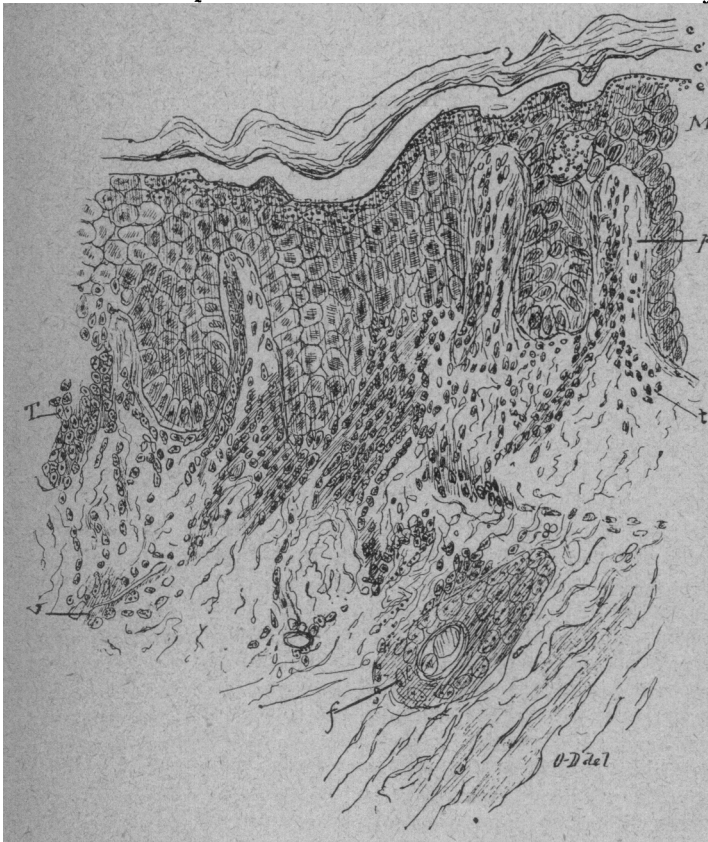


Fig. 6. Relapsing desquamative scarlatiniform erythema.

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| c. Stratum corneum. | p. Papilla. |
| c'. Portion of above exfoliating. | l. Embryonic cells. |
| c". Lowest portion of stratum corneum. | f. Prickle cells. |
| e. Stratum granulosum. | v. Vessel. |
| M. Stratum mucosum. | f. Hair follicle. |

well marked to demonstrate the points in question. In order to eliminate any possible personal equation, I have borrowed the illustrations from other authors. It will be found that the essential differences between the two are so well-marked as to leave no possibility of a doubt. Petrini presents a section of a case of relapsing desquamative scarlatiniform erythema (*Comptes Rendus du Congrès Internat. de Dermat. et de Syphilig. de 1889. G. Masson, 1890, p. 44 et seq.*) which for all practical purposes is a disease identical with the one under consideration. Here we note that the upper portions of the stratum corneum are distinctly exfoliating, the lowermost portion remaining adherent to the stratum mucosum. The Malpighian layer has intercellular vacuoles in it and the papillæ are covered with embryonal cells.

In some parts of the rete mucosum the prickles cells do not appear to have gone beyond the embryonic stage (T) while we find embryonic cells about the blood vessels and scattered up to the papillæ. Even the hair follicle contains hyaline globules. Many of these apparently embryonic cells have some of the characteristics of lymph cells or wandering corpuscles, testifying to the fact that the process which has called them forth is of a character denoting its recent occurrence. Moreover, the general contour and outlines of the papillæ are preserved as well as the interpapillary prolongations of the rete. In the latter the prickles cells have preserved all of their characteristics, the cell walls and nuclei being sharply defined and only modified here and there by being apparently replaced by embryonal cells. (T.)

On the other hand, a picture of a marked inflammatory trouble is so widely different as to immediately attract attention. I have chosen for an exam-

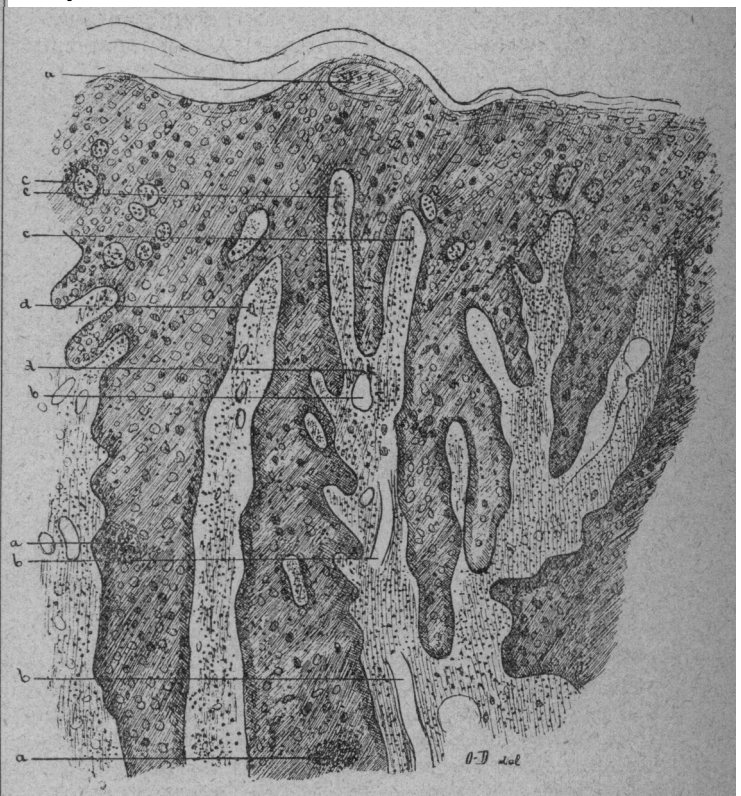


Fig. 7. Impetigo herpetiformis.

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| a. Round cell infiltration. |
| b. Dilated vessels and lymphatics. |
| c. Cellular infiltration and edematous exudation of the papillæ. |
| d. Pigment cells. |

ple a section of impetigo herpetiformis figured by Theodore du Mesnil (*Archiv. f. Dermatologie u. Syphilis, 1891, September 5*) in which can be seen a well-marked round-cell infiltration. Here we note a cellular infiltration and edematous exudation of the papillæ, which are apparently prolonged by the actual lengthening of the interpapillary prolongations of the stratum mucosum. The stratum corneum is intact, not having undergone any apparent change. The stratum mucosum is filled with lymph cells throughout its extent and at the edges where contact is effected with the papillæ a limited round-cell infiltration is visible. In addition to this, the blood vessels and lymphatics are markedly dilated and surrounded by a cellular infiltration. Pigment cells are found in the papillæ, an evidence which tes-

tifies to the fact that the process has existed for some time as is also shown by the other conditions present.

The two pictures given should certainly prove sufficiently conclusive as demonstrative of the rational differences existing between an erythema and a dermatitis, and as Petrini's demonstration is that of a process so nearly analogous as to be almost identical with relapsing desquamative erythema, such as described in the cases I have mentioned, it would appear to me that a careful consideration of the various points which I have brought forward would establish the fact, beyond the shadow of a doubt, that erythema exfoliativum recurrens is an erythema in the true sense of the word and not a dermatitis; and that the term, dermatitis, which has been applied to it is not only incorrect but misleading. It should be abandoned to give place to a term which is not only pathologically exact but which clinically is more clear, and which has the further advantage of placing the disease in its proper place in dermatologic nosology.

The etiology of the disease under consideration possesses more than passing interest. From the more or less imperfect histories of the few cases which are available it is a very difficult matter, indeed, to formulate anything of a definite nature. We can find but very few characteristics that are held in common by all the cases, beyond the exfoliation. The onset in each case is different, as also the course, duration and termination of an attack. The periods between separate attacks vary, not only in different individuals, but in the same one as well, in some cases. So far as determining a common cause is concerned, it can not be done. The alleged causes given by the patients differ, and no possible reason can be given by others for the peculiar affection which manifests itself in their persons. Taken altogether, we are confronted with a problem which appears rather difficult of solution, and the best that can probably be done is to weigh the probabilities in each case and determine that which seems the most worthy of consideration. It may be remembered that in a consideration of the scarlatiniform erythema of typhoid fever (*Journal of Cutaneous and Genito-Urinary Diseases*, August, 1890) which is relapsing in character, and to which the disease under consideration bears a remarkably close resemblance, if it is not identical in character, the opinion of Besnier was advanced, that the cause in scarlatiniform erythemas is never an exclusive one (*Ann. de Dermat. et de Syphil.*, January, 1890). This author states that, in his opinion, the eruption depends more on the subject himself; that there exists a predisposition. The individual becomes more susceptible to the process and this brings about a tendency of recurrence at continually shorter intervals; a circumstance which may be noted in all the cases given above, with the possible exception of the first in which the period of recurrence remained the same. Excluding toxic, septicemic, medicamentous and such similar causes, we are finally brought face to face with one conclusion which seems inevitable—that the cause is one dependent upon the nervous system and more particularly that portion in intimate connection with the vascular system. Dr. J. W. Moore long since regarded (*Dublin Journal Medical Science*, December, 1888) the trouble as one which probably depends on a reactive inhibition of the vaso-motor system of

nerves. That this is the most probable cause is amply testified to by the opinions of those authors who have ventured to advance one. Leon Perrin regards the condition as a reflex dermatosis agreeing in this respect with Fournier, Lewin, Besnier and others. Dr. Frank, in referring to his case (Case 1) says that the fact that the recurrence of the symptoms appears on the same day, and even the same hour of each year, can be possibly accounted for by the fact that it is a disease of the nervous system, as it is analogous in its recurrences to certain types of hay-fever. To this, Dr. Blanc demurs somewhat by calling attention to the fact that there may enter a disturbing psychical element. Dr. E. L. Standlee reports a case of annual shedding of the nails (*American Medical Journal*, December, 1891) accompanied by some exfoliation, but the entire report is so incomplete as to afford no clue, beyond the fact that the first attack occurred after contracting typhoid fever, a disease which is very prone to leave its effects on the nervous system. Dr. Perret (*Lyon Médical*, 1885), has attributed the cause primarily to rheumatism acting secondarily through the nervous system, whereas M. Rossigneux (*Lyon Médical*, March 21, 1892) is inclined to regard a possible nervous cause. An ingenious theory has been advanced by Paul Blocq (*France Médicale*, Jan. 23, 1886) to account for the various periodical attacks which are observed in certain individuals. He looks upon the cause as some microorganism, which multiplies continuously, until a certain period of time has elapsed, when it seeks an exit and in this very effort to escape, the symptoms which are observed are produced. This is certainly clever, but it can not be made applicable to the disease under consideration, and could only possibly refer to infectious troubles such as relapsing erysipelas.

To my mind, relapsing desquamative erythema is, beyond all possibility of a doubt, a trouble due to disturbance of the trophic nerves. In the cases which we have detailed, as well as in the numerous instances which occur scattered throughout medical literature, we find distinct nervous symptoms mentioned. The patients suffer from headache, or itching, or localized tingling sensations, or some other purely nervous trouble. Again, we find that the thermic phenomena are either a low fever, or none, or a state of hyperpyrexia out of all proportion with the condition present. Delirium may be present (Case 1), or a state bordering almost on melancholia. So far as the influence of the trophic nerves on the circulation of the skin is concerned, there is no doubt of it at this day. The erythema pudoris or ordinary blushing may easily become transformed into a morbid condition. The blush which was at first easily elicited, later on comes on without any apparent reason, and becomes recurrent unknown to the subject. It is some functional nervous trouble, probably residing in the sympathetic ganglia, and if we but generalize the condition and make it more marked, we find it transformed into a universal erythema. Add to this the greater implication of nerve structure, and we find then a symptom showing itself which is characteristic of nervous trouble of a trophic character—exfoliation. That the disorder must reside in the trophic system is corroborated by the negative results which have attended all examinations for nerve alterations. That an angioneurosis is intimately connected with the process in the production of recurrent exfoliative

erythema is shown by the fact that slight edema accompanies the first manifestation. The skin appears more or less translucent and, in some cases, vesicles make their appearance. The appearance of these lesions, more or less grouped, constitutes another link in the chain of evidence pointing to a neuropathic origin for the trouble. Another circumstance which seems to indicate this, is the comparative shortness of duration of the acute period of the trouble. Following this, there is apparently good health, during which the exfoliation is taking place. The whole force of the attack seems to spend its fury in a few days, and the period following this is passed in getting rid of the *débris* of the nervous storm which has occurred. The exfoliation is rather slow, as the separation is but partial and must be completed by the gradual process of the relaxation and tightening of the skin. This is further evidence of the superficial nature of the pathologic process. In desquamative processes of a marked inflammatory nature, such as psoriasis, pityriasis rubra or chronic eczema, the shedding of the horny layer is continual and rapid, the regeneration not only keeping pace with but often exceeding the loss.

Before closing the consideration of the etiology of the process, one question still confronts us—and it is one which is by no means easy of solution, if there be any for it. It is the periodicity of the attacks. It is no explanation to say that it is of nervous origin, as we find it in hay fever. This is merely shifting the ground of discussion. Why should this periodicity exist? Besnier's dictum that it is a predisposition is an explanation which explains nothing. The very fact of recurrence attests to this. Why this predisposition should exist is the question which we desire to solve. We may invoke idiosyncrasy, but in no case so far recorded, with the possible exception of the toxic and medicinal erythemas, do we find mention made of any possible cause to account for the trouble and which was observed prior to each attack. Blanc has made one suggestion which might have a bearing upon this, when he speaks of the possible influence which the mind might have. We know that self-suggestion is potent in bringing about certain nerve disturbances, and in one susceptible to an erythematous reaction consequent upon trophic nerve disturbance, this might possibly be an explanation. A better one, perhaps, would be the direct influence of telluric or atmospheric causes upon the cutaneous envelope. We can easily understand how such would act upon the sympathetic nerve centers, and these in their turn bring about a reflex disturbance of the trophic nerves leading to the appearance of the erythema. And there is a history, in some cases of scarlatiniform erythema, of the attack following an exposure to a cold wind or chilling atmosphere. Moreover, herpes zoster is observed to supervene upon exposure to cold and damp surroundings, as also being caused by the purely psychical disorder of anger. I do not wish to pursue the subject at greater length, deeming what I have said sufficient not to convince, but rather to incline one to the theory of the neurotic origin of recurrent desquamative erythema.

The treatment is a very simple one, consisting merely in protecting and soothing measures. While, in many cases, symptomatic treatment has been employed, there is no evidence that it exercised any particularly beneficial action, so far as the cutaneous symptoms were concerned. The protective measures

employed have certainly had a direct effect as prophylactics in preventing a possibly graver condition which might be induced by irritation due to an extraneous source. Of course, such measures are not only proper and rational, but even imperative. To neglect their application would certainly argue not only a disregard for the patient, but also a serious disregard for the exigencies of the case in hand. In the last case detailed, the patient was always supposed to be affected with malaria when the symptoms first declared themselves, and was accordingly given quinin, to whose effects she attributed her trouble. Still, others having the same prodromic symptoms and the same subjective sensations are recorded as never having taken any medicine, so that we can not conclude that the therapeutics had any effect whatever in calling the disturbance into being.

Is erythema exfoliativum recurrens a rare disease? We are inclined to say that it is not. There seems to be quite an amount of confusion existing in regard to its nomenclature and, for this reason, it has been described under a multiplicity of names which have only led to confusion. Idiopathic scarlatiniform erythema of a recurrent type, as well as recurrent dermatitis exfoliativa are, beyond a doubt, examples of the same affection. Many isolated cases are described, under various designations, whose descriptions and clinical histories coincide with the affection I have attempted to portray. Much confusion has been added by denominating it a dermatitis, as well as by magnifying certain minor attributes which are disproportionately enlarged and dwelt upon at the cost of others apparently more trivial and perhaps more important. As this paper has already transgressed upon the limits which it should occupy, I will close, hoping that it will have awakened a certain amount of interest in that ever shifting and varied group of cutaneous affections included in the classes of the angioneuroses and erythemas.

PNEUMONIC FEVER; ITS SYMPTOMATOLOGY.

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CHICAGO.

NERVOUS SYSTEM.

Headache of more or less prominence is encountered in almost every case.¹ In my experience it has not seemed to differ in character from that met with in other febrile disorders. It is a symptom of the early periods of the attack, in adults usually diminishing or ceasing after a few days. In children it is often a most distressing symptom,² continuing throughout the attack and possibly overshadowing all others. Severe frontal headache is so constant and prominent in senile pneumonic fever that its occurrence in an aged person should lead to an examination of the lungs. The headache is greatly aggravated by efforts at coughing and vomiting.

Juergensen³ has met with two cases of pneumonic fever following exposure of the bared head to the hot sun, in which the seizure began with lancinating pains in the head and the symptoms of insolation.

It has been thought that headache is more constant and severe in those cases accompanied by nephritis, but I have met with nothing in my experience to confirm this view. In some cases there is an extraordinary pulsation of the temporal and retinal arteries, and in these I have thought the suffering to be more acute and severe.