

two other noted pugilists have died at advanced age. One of them, Jem Ward, born in London on Christmas day, 1800, was perhaps the oldest boxer in the world. Most New Yorkers can recall Ottignon and "Pop" Whittaker in this connection. I know yet of an old man of 75, who still puts up his hands in a surprising manner and, barring eye sight, is well preserved.

A few years since, in San Francisco, I was walking in the street with the Secretary of the Olympic Club, who talked to me of this very matter, when we came across a very old man, whom he pointed out as a corroborative instance of what he was telling me. This man in days gone by, had been an athlete of the most violent kind, in fact, a man who had misused athletics by such feats as walking a thousand miles in a thousand hours and other like senseless performances.

The untimely death of several notables who have figured extensively in the athletic world during the last fifteen or twenty years, has, in every instance, as far as could be ascertained, been owing to preventable or to immoral causes, the nature of which it is not necessary here to specify. The possibility of over-exertion being the cause of impaired health in after-life is exceedingly problematical.

The result is rather owing to immoderate indulgence and to the neglect of simple hygienic rules. It is, of course, possible for one to abuse and overdo physical exercise, just as one may do by eating too much bread and thereby poisoning oneself; but enlightened common sense would say that in a misuse of this kind, it is the man, not the bread or the athletics that should bear the blame.

On this subject, Dr. Sargent, of Harvard, tells me that he thinks it but fair to state that in many instances the early demise of athletes cannot be directly attributed so much to the results of athletic work as to the free indulgence of gross appetites and passions which they have not the moral power to control, and where this was not the case, they lived beyond the average. From extensive personal knowledge he knows of but two deaths attributable to over-exertion; the others were from dissipation, and its train of attendant evils. Inquiry seems to establish the fact that the occupation of athletics is more favorable to longevity than many of the mechanical and industrial pursuits, notably those of shoemaker, tailor, baker, clerk or miner; and if further trust may be placed in vital statistics, merchants, capitalists, financiers and persons engaged in the transfer of property have not the same lease of life.

I have now put in light a sufficient number of facts the very opposite from those of other observers, who seem to have limited their sphere of action to but one side of the question.

My collection of facts may be wanting in delicate analysis, and the homogeneity and regularity indispensable to science; but the observation of such as I have brought forward, even when observed without the aid of method, forces upon us the induction that no good reason exists for the wholesale condemnation of athletics. On the contrary, it is evident that the healthy exercise of the physical powers, is one of the necessary pastimes of a manly and vigorous race; and that next to food and sleep athletics has the largest share in the recreation of human life. It is, therefore, high time that the conventional opinion of certain medical men and of some educators on this subject should be set aside, and that all the manly sports should be encouraged, and fostered with a view to promote qualities that intimately concern not only the happiness and usefulness of individual life, but also the good of society, and the future of the human race.

SCARLATINIFORM RASHES.

Read before the St. Louis Medico-Chirurgical Society, Oct. 30, 1888.

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There is made no claim of originality for this paper, as it consists simply in a re-arrangement of what is to be found in the text-books and current literature of the day. My object has been to group together in this form those erythemata and other diseases of the skin which may by their resemblance to scarlet fever lead to errors of diagnosis, believing that the setting of old truths in a new light is not devoid of benefit.

The early *roseola of syphilis* may somewhat resemble scarlatina, especially when attended with throat complications and syphilitic fever. It is not necessary to do more than allude to the possibility of mistake here.

It was long since noted, by Sir James Paget, that the wounded are specially predisposed to scarlet fever. This was confirmed later by many eminent French and English observers. Mr. Holmes, while admitting the fact, contended that many so-called cases of "surgical scarlet fever" were really due to septicæmia or pyæmia, to the absorption of some other than the true scarlatinous poison. I believe that the predisposition above spoken of, and also the existence of a *scarlatiniform septicæmic rash*, are now admitted on all sides, but there seems still to be considerable difference of opinion as to the relative prevalence of the two.

The appearance of a scarlet rash in a puerperal woman gives scope for the exercise of one's diagnostic powers. The date of delivery marks a change in the receptivity of woman for the contagious diseases. The pregnant female is *less*,

and the puerperal female is *more* liable than others. Not only so, but the disease is apt to run a malignant course in the latter condition. It is in the occasionally mild cases, however, of scarlatina puerperalis that the difficulties of differentiation arise. For there has been observed a septicæmic rash in this condition essentially the same as that due to sepsis occurring as a surgical complication. It may present, as in a case observed by myself some years ago at the Female Hospital, a most deceptive counterfeit of true scarlatina. Dr. J. C. Thomas, in the *Journal of Cutaneous and Venereal Diseases* for January, 1885, gives the points of differential diagnosis as follows: "The absence of the history of the prodromata of scarlatina, the absence of throat symptoms, the moderate temperature and the moderate amount of constitutional irritation, the history of the development and decline of the eruption and the character of the desquamation." The last is apt to be in large scales and strips. The fever is slight and other evidences of sepsis usually not pronounced. In the three cases reported by the writer just mentioned the rash appeared on the second, fifth and ninth post-partem day, severally. The eruption remained out seven or eight days in these cases. Duhring thinks the rash appears between the third and fifth days.

The period of invasion or first day or two of eruption of variola is sometimes marked by the appearance of an *adventitious rash* which may be roseolar, urticarial or petechial, but which at times, as in a case of mine, simulates true scarlatina of the most intense type. It should be remembered, however, that smallpox and scarlet fever may occur in the same individual at the same time. The adventitious erythema, however, is more short-lived than the exanthem it mimics, and will also be without a history of scarlatinal contagion. Where both contagia are present one may well pause before giving a decided opinion. It was once my fortune to have under my care a family consisting of a mother and three children. The mother and one child had smallpox, another child at the same time had unmistakable scarlet fever, and the third died exsanguine from repeated hæmorrhages from various mucous orifices. Had it not been for a few abortive papules about the wrists, the diagnosis between scarlatina hæmorrhagica and variola hæmorrhagica would not have been made.

Diphtheria is at times accompanied by a cutaneous manifestation which may be scarlatiniform, although oftener roseolar. A case of this kind was reported by me, and another by Dr. Hermann, before this Society last April. Bearing in mind the fact that scarlatina anginosa may present patches of necrotic membrane on the fauces, palate, etc., constituting the so-called "scarlatinal diphtheria," in which the membrane is essentially identical with that found in primary diphtheria,

the difference being, according to most observers, purely etiological, it can easily be seen how difficult the diagnosis between scarlatinal diphtheria and diphtheria with scarlatiniform erythema may become, especially when we add another complicating factor to the problem, which is, that true diphtheria and scarlatina may co-exist in the same individual. J. Lewis Smith claims to have seen cases of uncomplicated primary diphtheria derived from the last named complication, thus establishing, if we accept the observation, the true diphtheritic nature of the process in the last named class of cases.

As to the establishment of the separate identity of "scarlatinal diphtheria" and diphtheria with scarlatiniform rash, we must remember that although there would probably be in both adenopathy and perhaps albuminuria, that in the first named disease there is never, according to Koven and Henoch, secondary paralysis. Of course there may be paresis from inflammation, or necrosis of muscular tissue. The fugacious character of the symptomatic erythema would be its chief diagnostic feature. There have been recognized two forms, one, early, accompanied with but little fever, and another, late, the effect of sepsis.

Dr. Brocq, of Paris, in an article on "Desquamative Scarlatiniform Erythema," in the *Journal of Cutaneous and Venereal Diseases* for August, 1885, from which I draw largely, says that this affection "is characterized by an initial stage of pronounced fever, similar to that of scarlatina; by an intense redness of the entire cutaneous surface, which subsequently peels off in flakes; and by the occurrence of complete recovery in from three to six weeks." After the subsidence of the primary attack the disease tends to reappear three or four times, or even oftener. Hence the word "relapsing" has been prefixed to its designation. The doctor had at the date mentioned collected 14 cases.

The eruption is preceded by a precursory stage of variable duration, sometimes lasting several days, during which there are feelings of discomfort and fatigue, and rigors followed by high fever, attended at times with violent head and back ache.

The point at which the cutaneous lesion first appears is sometimes on the upper and sometimes on the lower part of the body, usually diffusing itself over the whole surface in twenty-four hours, although it may take as long as four to six days. The face, as in scarlatina, is usually not so red as the rest of the body. In a general way it may be said that the extensor surfaces are of lighter tinge than the flexor. The abdomen, however, is often quite dark. The redness can be temporarily obliterated by pressure of the finger.

The time at which desquamation appears can not be accurately determined, but it is often three or four days after the eruption has reached its

height, and while it is still in full florescence. This phenomenon is first noticed at the regions earliest implicated and is remarkable for its flaky character, the flakes being large, thin and transparent, and for its abundance. In one case mentioned by the author from whom the main facts of this description are taken, three litres of scales were collected in five days. On the face the scales are smallest, in fact furfuraceous, and are largest about the neck. On the palms the same desquamation *en masse* may take place as is observed in scarlatina. With the outset of desquamation the constitutional symptoms disappear. The mucous membranes of the throat and eyes are sometimes reddened.

The period of scaling averages between two and three weeks of duration.

The diagnosis between this disease and scarlatina is difficult when we have to do with a first attack, and sometimes only a retrospective diagnosis will be possible. But in this disease the onset is less abrupt than in scarlet fever, the redness of the skin is more marked and often persists after the eighth day, desquamation is more abundant, is lamellated, and frequently repeated. The disease is non-contagious, and nephritis and adenopathy are never present. Cases of this kind have been reported by Besnier, Féréol, Duhring and others, and seem to have been included by Bateman under the head of pityriasis rubra, a name since restricted to a different and much graver affection.

Hardy has described a *scarlatiniform erythema*, the *roseola scarlatiniforme* of Bazin and *erythema punctatum* of M'Call Anderson which lasts from 24 to 48 hours, presents an appearance of the skin almost identical with that of scarlatina, and is followed by some scaling off. It seems always to depend upon gastric derangement and is non-contagious. The points which distinguish it from scarlatina are, that the pulse remains nearly at the normal, the tongue continues to present its normal appearance, and that there are no sequelæ of any kind. Of course it is as liable to occur in one having had scarlatina as in anyone else, and, on the other hand, confers no immunity against that disease.

The early stages of *pityriasis rubra*, or *dermatitis exfoliativa*, may be mistaken for scarlatina. But in the affection known under these two names there are no prodromata, the temperature is generally lower, and the course of the disease, except just at first, altogether different.

I have reserved a brief notice of the best marked of the scarlatiniform rashes due to the ingestion of drugs for the end of this paper. A thorough treatment of even this limited portion of the subject of dermatitis medicamentosa would exceed my powers of performance and yours of attention. The subject is growing every day, because, first, it is not long since it began to receive

the attention it deserves, and second, from its very nature it ever must grow. As new drugs are introduced new drug eruptions will be heard of.

Perhaps the most truly scarlatiniform of these is that produced by *belladonna* or *atropia*. It was this which led believers in the doctrine of similars to use the drug in the treatment and prophylaxis of scarlatina. In this, as in all forms of medicamentous dermatitis, personal idiosyncrasy is the chief etiological factor, the most marked effects sometimes following the smallest doses. Children are said to be more obnoxious to this accident than adults, but that it is by no means confined to them may be illustrated by the following observation.

A lady 67 years of age had a few drops of a solution of the sulphate of atropia, 2 grs. to the ounce, dropped into each eye. She soon complained of dizziness, intense faucial dryness and general pruritus. On examination I found both pupils dilated *ad maximum*, and the face and neck of a bright scarlet hue, which gradually faded and disappeared in something less than twenty-four hours. Six months later the same procedure was followed by the same results. It is manifestly unnecessary here to indicate points of diagnostic difference, but I may be permitted to call attention to the fact that the belladonna eruption is most profuse where the exanthem is usually palest, *i. e.*, about the face.

The *chloral* eruption is sometimes much like that last described, lasts from a half to four hours, and may be followed within twenty-four hours by light desquamation. The occurrence of a relapse after discontinuance of the medicine has been observed and need not cause us to change our minds as to the drug and the erythema bearing to each other the relation of cause and effect.

The cutaneous accident due to the ingestion or absorption of *mercury* is often scarlatiniform. A dose of 2 grains of calomel has been known to bring out a copious eruption.

Opium and *morphine* bring out at times a rash of this type, which, like scarlatina, is apt to be best marked on the flexor surfaces. It is occasionally followed by desquamation, glove and stocking casts having been shed off as in the exanthem. To make the resemblance greater, there is at times an erythematous inflammation of the pharynx.

The *quinine* eruption may at times closely simulate scarlatina. The absence of characteristic prodromata, of sore throat, of the rapid pulse and the characteristic tongue should aid us in detecting the counterfeit. Here again there has been observed desquamation similar to that following the opium rash, as in a case reported to this Society by Dr. Wolfner.

The eruption due to *oil of turpentine* is likewise sometimes followed by desquamation.

Digitalis, *stramonium*, *strychnia* and *salicylic acid*

might also be mentioned here. The list of drugs which have been known to produce eruptions having some resemblance to that of scarlet fever might be greatly extended, but my desire is to mention only those the effects of which would be most likely to mislead in the particular direction now under consideration. I suppose it is well understood that the medicaments mentioned may produce effects differing widely from those which have been described. In fact it would seem that the particular type of the cutaneous accident depends more upon individual peculiarity than upon the drug administered.

I am chiefly indebted for the facts mentioned in the last part of this brief review to the writings of Arthur van Harlingen and P. A. Morrow, which all may consult with benefit.

AN INTRODUCTION TO THE STUDY OF PNEUMONIC FEVER.

BY EDWARD F. WELLS, M.D.

FIFTH PAPER.—GEOGRAPHY.

Medical geography is, equally with historical pathology, one of the most fruitful means of etiological research. It enables us to become acquainted with the different regions of the globe in which certain diseases prevail, and thus allows upon the grandest scale the study of cosmic, tellurial and even anthropological conditions that may favor or hinder their development.¹

Pneumonic fever prevails in every part of the world, but, as is the case with all other maladies, it is more common in some localities than in others.² It is more prevalent in temperate than in either frigid or torrid regions. Beginning at the poles, its frequency increases in a gradual manner until the maximum is attained at a certain latitude in either temperate zone, and from these points it diminishes as we approach the equator, so that in some tropical countries the malady is somewhat of a nosological rarity.³ This is only true as a general proposition, and there can be found so many apparent exceptions that it is quite clear that latitude alone has no influence over the prevalence of the disease.

The influence of latitude upon the prevalence of pneumonic fever is shown in the following table:

TABLE X.—SHOWING LATITUDINAL PREVALENCE OF PNEUMONIC FEVER.

LOCALITY.	DEATH RATE.	
	Per 100 Deaths.	Per 1,000 Persons.
0°-10° North.		
Ceylon . . . . .	. . . . .	.70
Sierra Leone . . . . .	. . . . .	.50
Average . . . . .	. . . . .	.60
10°-20° North.		
Antilles . . . . .	. . . . .	1.30
Bombay . . . . .	. . . . .	.40
Central America . . . . .	. . . . .	1.82
Jamaica . . . . .	. . . . .	.30
Madras . . . . .	. . . . .	.70
Average . . . . .	. . . . .	.90
20°-30° North.		
Bengal . . . . .	. . . . .	1.40
Cuba . . . . .	. . . . .	1.40
Florida	6.6	.74
San Antonio	1.9	.33
Sandwich Islands	2.0	.61
Averages	3.5	.89
30°-40° North.		
Alabama	9.7	1.38
Algiers . . . . .	. . . . .	2.10
Arizona	10.3	.75
Arkansas	13.2	2.43
Baltimore	6.5	1.13
Bermuda . . . . .	. . . . .	.60
California	10.6	.74
Charleston	3.6	1.30
Cincinnati	6.7	1.54
Colorado	18.0	1.92
Delaware	6.6	.83
Denver	14.3	1.85
District of Columbia	9.0	2.05
Georgia	7.8	1.09
Gibraltar . . . . .	. . . . .	.70
Kansas	9.0	1.60
Kentucky	8.0	1.09
Knoxville	9.0	1.55
Louisiana	12.7	1.56
Malta . . . . .	. . . . .	.50
Maryland	8.0	1.13
Memphis . . . . .	. . . . .	2.50
Mississippi	12.2	1.57
Missouri	13.3	2.18
Nevada	20.2	2.36
New Mexico	6.5	1.34
New Orleans	4.4	1.59
North Carolina	5.9	.91
Petersburg	7.0	1.75
Philadelphia	6.2	1.30
Richmond	5.1	1.29
San Francisco	8.0	1.63
Savannah	5.2	1.70
Selma	12.0	2.00
South Carolina	7.6	1.12
St. Louis	6.3	3.77
Tennessee	8.6	1.41
Texas	10.4	1.59
Utah	12.2	2.06
Virginia	7.7	1.24
West Virginia	5.8	.70
Averages	7.8	1.51
40°-50° North.		
Austro-Hungary . . . . .	. . . . .	2.42
Bavaria . . . . .	. . . . .	2.20
Belleville, Ont. . . . .	. . . . .	.63
Boston	3.7	1.23
Brantford, Ont.	5.3	1.27
Brooklyn	9.0	1.71
Canada	8.0	1.42
Chicago . . . . .	. . . . .	1.09
Cleveland	5.5	1.41
Connecticut	5.7	1.15
Dakota	6.6	.81
France	8.4	1.90
Geneva . . . . .	. . . . .	1.30
Guelph, Ont. . . . .	. . . . .	.63
Hamilton	4.3	1.13
Hartford	5.4	1.66
Idaho	7.4	1.09
Illinois	10.8	1.48
Indiana	9.6	1.60
Iowa	9.0	1.00
Italy	8.1	1.85
Kingston . . . . .	. . . . .	.87
London, Ont.	4.3	.90
Mame	6.2	1.08
Massachusetts	8.3	1.35
Michigan	6.6	.80
Milwaukee	5.8	.90
Minnesota	5.5	.58
Montana	5.0	.82

¹ Charcot, Diseases of Old Age, N. Y., 1881, p. 85.

² Huss—Lungenentzündung, etc., Leipzig, 1861, p. 2—says that the prevalence is everywhere the same.

³ For a discussion of this entire question see Lannec, Traité de l'Auscultation Médiate, Paris, 1819; Swett, Diseases of the Chest, N. Y., 1856, p. 79; Grisolle, Traité Prat. de la Pneumonie, Paris, 1841, p. 124; Juergensen, Ziemssen's Handb. d. Spec. Path. u. Therap., Leipzig, 1877, Bd. V, S. 13; Fonsagrave, Encycl. des Sci. Méd., t. xviii, 1876, art. Climate; Flint, Handb. d. Hist.-Geog. Path., Erlangen, 1860-64, Bd. II, S. 26; Flint, Am. Jour. Med. Sci., Jan., 1861, p. 17; Green, Quain's Dic. Med., N. Y., 1883, p. 874; Sanders, Am. Jour. Med. Sci., July, 1882, p. 94; Ziemssen, Präger Vierteljahrsschr., 1858.