

A New  
Epidemic Skin Disease.

Thesis

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by

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W.



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In introducing the subject of a new epidemic skin disease; the writer feels that a few remarks on epidemics in general, will not be out of place.

The subject is a very complex one and although we are constantly adding to our knowledge of them, we seem to be; owing to the uncertainty and vagueness of that knowledge; almost as much in the dark as ever -

The difficulty lies not so much in the effect of epidemics as in their aetiology. With the advance of science, and the progress of civilization, there has been a corresponding advance of our knowledge of the prophylaxis of zymotic diseases, and consequently, civilized communities, seldom or never experience scourges, of the violence and extent of the Plague of London; or of the great Plague called the "Sweating Sickness" which occurred in the reign of Edward III.

Improved drainage and water supply. The amelioration of the dwellings of the

poor. The various Factory Acts. The more stringent regulations of the Board of Trade with regard to the Mercantile Marine. The compulsory notification of Infectious diseases, and the establishment of Fever Hospitals. Compulsory Vaccination. All these <sup>precautions</sup> in a greater or less degree, have tended to make the conditions unsuitable for the growth and development of Bacteria, and by promoting the general health of the community, have rendered it less liable to succumb to the organisms of disease, or the poisons generated by them.

A striking instance of the value of modern methods in preventing the importation and spread of epidemics, was seen in the Cholera scares of 1892 and 1893.

So stringent were the regulations, and so thoroughly were they enforced, that the disease never obtained a footing in this country.

Epidemics of Typhus fever are now almost unheard of in this country owing to improved sanitation, and prevention of overcrowding.

Whilst the value of vaccination in modifying the violence, and extent, of Small Pox epidemics; has been proved over and over again-

The effect of climate as influencing epidemics may be briefly referred to-

It is worthy of notice that ~~although~~ the climate of England has remained the same as it was in past centuries, and any elements in it which may have favoured epidemics in the past, must still exist. Yet owing to the advance of civilization, we are not the victims of such terrible scourges as occurred long ago. Thus shewing, that the climate in England, probably, has not played an important part in the production of epidemics. The same cannot be said of all climates. Extremes of heat and cold seem to have opposite effects in their relation to epidemics. The tropical climate seems to have a marked fostering influence in the production of certain diseases. Whilst amongst races in the Frigid Zone devastating epidemics are <sup>almost</sup> unheard of-

This striking difference is probably due to the fact that in nearly all cases a moist warm atmosphere, such as exists in the Tropics, favours the development and persistence of micro-organisms; whilst on the other hand a very cold dry atmosphere such as <sup>prevails</sup> ~~exists~~ in cold countries, is most inimical to the development of organisms.

This difference in fact <sup>manifests itself</sup> ~~exists~~ throughout the whole animal and vegetable Kingdom. The tropics densely populated, rich in vegetation and swarming with animal life; presenting a striking contrast to the sparsely populated barren lands of the Frigid Zone.

The epidemic skin disease under notice is an instance of warm weather favouring the development of organisms. The height of the epidemic being reached during the summer months of 1891.

The next point to be referred to is that of changes of type in epidemics, and certainly the one treated of below is an instance of this. Dr Crocker and Dr Stephen McHenry

had seen isolated cases similar in their nature, yet they had never before witnessed, or heard of an epidemic of this nature - Doubtless this epidemic skin disease is rather an instance of a new type of epidemic, than the recurrence of an old one with increased virulence.

Dr Crocker inclined to the view that the disease must be due to some organism or its product, probably the latter - Having started in the St Marylebone and Paddington Infirmeries or similar institutions, it was easy to conceive that the clothing or air became impregnated with the *materia morbi*, and hence, owing to certain conditions fostering the development and spread of the poison, the disease became epidemic in character. It would therefore seem either, that the virus producing the disease has gained in strength; or, that the conditions under which the epidemic occurred, were such, as would favour the further development of the poison, and extend its field of action. For there were large numbers of aged and

infirm patients most of them suffering from chronic diseases - The wider diffusion thus brought about lessening the chance of susceptible people escaping -

Doubtless both conditions helped to establish the epidemic character - But probably the most important factor was the increased strength of the virus; since the Institutions mentioned above, or others similar in their nature have existed for a great number of years, without the appearance of any epidemic of this nature; in connection with them.

As will be stated further on, ~~to~~ Dr. Savill\* (M. Supdt. Paddington Infirmary) ~~and the~~ considers the disease a new one, and in this view the writer concurs -

But whether the disease be a new one, or an old one which has taken on an epidemic character, it has now established itself & will probably recur from time to time, and in fact this is the case, for there was a slight recurrence in the Paddington Infirmary, in the autumn of 1892. ~~At~~  
 of

\* Epidemic Skin Disease.

The question of "Immunity" may be briefly referred to in connection with this epidemic. It certainly seemed a curious thing that children with tender skins, ~~and~~ many of them in a very feeble state of health should with few exceptions have been exempt from the disease - This may to some extent be accounted for by the fact, that amongst the children, there were fewer individuals with a breach of surface, than was the case - amongst the aged, many of whom suffered from ulcers and bed sores.

The comparative immunity among the staff, both at the St. Marylebone and Paddington Infirmeries, may be explained on the ground that their general health was good, and consequently there was no predisposition to the disease.

Bacteriology has of late years made great strides and much light has been thrown on many diseases, by this branch of Pathology. But in many cases in which an organism has been discovered it has been impossible for various reasons to reproduce the disease, or in other words to carry out Dr. Koch's

formula with regard to the causation of disease by organisms. So that much of the research at present is of the nature of speculation. There is no doubt that the tendency now a days is to ascribe every disease to Bacteria. Given any disease, find the organism, and there generally seems one to be found. This has been the case in the epidemic under notice. An organism has been found in cultivations from the discharges taken from patients suffering from the disease by Drs Reissen Russell and Savill. So far however no one has been found sufficiently courageous to allow himself to be unisculated with the said organism. A Rabbit was however unisculated by Dr Savill, who states that some roughening of the cuticle was produced.

With these few preliminary remarks the writer will now give a more detailed account of the Epidemic skin disease. Before doing so he must note his indebtedness to Dr Savill, <sup>(late)</sup> M. S. Paddington Infirmary, Dr Lunn M. S. St. Marylebone Infirmary,

and Dr. Elkins who has afforded some information with regard to an epidemic occurring at Greenock during the winter of 1888-89. \*

The first epidemic of this nature that has been put on record, occurred at the Greenock Parochial Asylum and Poorhouse between the autumn of 1888 and the spring of 1889.

This epidemic did not arouse any great interest in medical circles at the time: and it was not until the more extensive epidemic, occurring in 1891, that much notice was taken of it.

Dr. Richards the Med. Supdt. at the Hanwell Asylum says that in the autumn of 1890 a similar epidemic broke out amongst the patients there, and at the same time Influenza was rife amongst them.

The epidemic recurred again in the autumn of 1891 and was more severe than the epidemic of the previous year, there being thirty-eight cases at Hanwell, one hundred and sixty five at Paddington Infirmary, and

\* Notes upon an outbreak of an unusual form of Skin Disease - by F. A. Elkins.

Pub. by T. W. Danks and Co  
Soho Square. W.

one hundred and ninety three at the St Marylebone Infirmary -

Dr Downes Govt Inspector at a meeting of the London Medical Society of 30<sup>th</sup> Nov. 91; said that no epidemic of the kind had been observed in any other part of England and Wales; with one exception. This was a workhouse in the West of England where there had been an unusual amount of general Eczema, and three or four cases of Pityriasis Rubra. It will thus be seen that so far as is known no epidemic of this nature has ever occurred before -

### Aetiology and Pathology.

Predisposing causes:-

Age. This was perhaps one of the most striking features of the disease. The nature of the disease was such that one would have expected the tender skin of infants to have been more prone to be attacked than that of old people. But such was not the case. In the epidemic at Greenock the children entirely escaped.

A table prepared by Dr Hugo. and published

by Dr Savill in the British Medical Journal of Jan. 9<sup>th</sup> /92 gives a very clear idea of the predisposing influence of age, in the epidemic at the Paddington Infirmary. (copy of table attached.)

Table showing Proportion between the Number of the Cases at a Certain Age and the Number of Persons in the New Infirmary at that Age.

Age... ..	1-9		10-19		20-29		30-39		40-49		50-59		60-69		70-79		80-89		Totals at all Ages.		
	M	F	M	F	M	F	M	F	M	F	F	M	F	M	F	M	F	M	F	M	F
Number of patients under treatment at that age	27	29	8	16	24	.	28	18	29		26	17	43	30	37	42	5	14	227	228	
Number of case affected with the disease	1	0	0	1	2	2	2	1	8	2			16	12	18	9	1	4	57		
Proportion between cases of the disease to patients under treatment at that age (per cent.)	3.7	0	0	6.25	8.33	6.06	7.14	5.55	27.58	6.89		34.61	11.76	37.20	40.00	48.64	21.42	20.00	28.57	25.11	14.47
Proportion attacked in both sexes combined	1 out of 56 = 1.78%		1 out of 24 = 4.16%		4 out of 57 = 7.01%		3 out of 46 = 6.52%		10 out of 58 = 17.24%		11 out of 43 = 25.58%		28 out of 73 = 38.35%		27 out of 79 = 34.17%		5 out of 19 = 26.31%		90 out of 455 = 19.78%		

This table shews that amongst the first four decades of life, 3, 6, 8 and 7% respectively were attacked - While in the 5<sup>th</sup> decade 27% were attacked. The proportion steadily increases in the 6<sup>th</sup> 7<sup>th</sup> and 8<sup>th</sup> decades but falls away somewhat in the 9<sup>th</sup>. No statistics of the epidemic at the St Mary-lebone Infirmary are to be had but Mr. Lunn states that children were almost exempt and that the old people were far more prone to take the disease.

At Hanwell, Dr Richards states that out-

of 38 cases which occurred in his institution 5 were between 30 and 40; 6 between 40 and 50, 12 between 50 and 60, 8 between 60 and 70 and 7 between 70 and 80. ~~It will be seen that children entirely escaped.~~

Sex. From the above table it will be seen that at the Paddington Infirmary 25% of the male patients were attacked whilst 14.5% females suffered. At the St. Marylebone Infirmary the proportion of females was much higher, being 88 females to 95 males.

Previous Health. Dr. Elkies in his monograph on the Greenock epidemic says:

" The Greenock Parochial Asylum and Poor  
 " House usually contains 280 insane and  
 " about the same number of sane paupers.  
 " Of the sane paupers about 130 were in  
 " the Hospital and Infirmary Wards, and  
 " were therefore in a weak state of health.  
 " The outbreak centred itself in the Hospital  
 " and Infirmary wards. Among the insane  
 " inmates only two very mild cases oc-  
 " curred. None of the nurses took  
 " the disease but both the matron and the  
 " writer had slight attacks.

At the Paddington Infirmary Dr. Savill in his monograph on the epidemic at that Institution says:-

" Among the patients of the New Infirmary  
 " 19.7% were attacked, but among the  
 " healthy staff only two (myself and a  
 " housemaid) or 3% -

" Again out of 391 patients in the  
 " Workhouse sick wards 18.6% suffered  
 " from the disease; whereas out of 169  
 " aged and infirm but otherwise healthy  
 " inmates of the Workhouse proper only  
 " 11 were attacked or 6.5%; and of  
 " these seven were "helpers" in the sick  
 " wards and constantly tending on  
 " patients suffering from the disease."

The St. Marylebone Infirmary is differently situated with regard to the workhouse, <sup>it</sup> being ~~two~~ <sup>four</sup> miles distant from it. So that no comparison can be made between healthy & diseased inmates - There were very few cases among the working staff of the Institution, and these of a very mild type.

None of the 38 cases at Harwell terminated fatally - The type being a much milder one

It is curious that at Greenock only two cases occurred among the Insane patients and these also were of a very mild type.

Patients suffering from Ulcers of the Leg were especially prone to be attacked. No other disease seemed to have a specially predisposing effect.

From the above it will be seen that the predisposing influence of bad health was very strong.

#### Exciting causes.

Diet. This was gone into thoroughly, but nothing peculiar could be made out.

The diets in the London Infirmaries are liberal and the food of good quality. In nearly all cases the food at the different Institutions is obtained from different contractors. The only articles in common between the Paddington and Marylebone Infirmaries being the milk and fish.

But the food consumed at Greenock and Hanwell was obtained from quite different sources. It does not seem possible therefore that the diet could have had anything to do with the causation of the epidemic.

Washing. The soap used at Paddington and Marylebone was different. The same soap had been used for some time past without any ill effect. Dr<sup>r</sup> Wallace the Visiting Physician, was of opinion that the epidemic at Greenock had something to do with the Laundry. The linen being evidently badly washed. But this was not the case at Paddington and Marylebone. At both these Institutions the laundry is built on the most modern principles and is considered quite one of the best features of these Infirmeries which are the newest and best equipped in the country.

Water. The supply at the different Infirmeries was not the same.

Scabies. Dr<sup>r</sup> Elkins says:-

"Scabies a too familiar disease at —

"Greenock was also carefully excluded. At Marylebone and Paddington scabies was not detected in any of the cases.

But what strikes one in this connection is, that if any local irritant was the exciting cause - How was it that the children escape?

Their skins would be more susceptible to the action of any irritant such as soap, scabies, or waters -

### Climate and Season.

It has been already stated that in the year 1891; the Epidemic seemed to be limited to Institutions in and around London; with the exception of one Infirmary in the West of England. But it seems difficult to suppose that there was any material difference between the climate of London and that of the rest of England, or that such difference if it existed could have had any effect in producing the disease. Moreover the one exception of the Infirmary in the West of England shewed that the disease was not limited to the metropolis. This is also instanced by the epidemic at Greenock -

Although most of the cases occurred in the summer and autumn months, the epidemic at Greenock was mostly confined to the winter months - So that under this head no light is thrown on the causation of the disease -

### Arsenical Poisoning. A rather ingenious

suggestion has been made, as to whether the newness of the buildings had any effect in causing the epidemic -

It is certainly a curious fact that the buildings at Paddington, Marylebone and Greenock, were recent -

Might not Arsenical walls have had something to do with the disease?

As will be seen later on many of the symptoms of the epidemic disease, suggest Arsenical poisoning - such as :-

- (1) Oedema of Eyelids.
- (2) Vomiting and Diarrhoea. (sometimes bloody)
- (3) Pains in the limbs.
- (4) Loss of appetite
- (5) Vesicular eruption followed by exfoliation of cuticle.
- (6) Progressive weakness.
- (7) Shedding often of hair and nails.
- (8) Pigmentation of skin.
- (9) Children bear Arsenic well.

There are however insuperable difficulties to this theory -

(1) How could the patients get sufficient Arsenic into their systems to account for the severity of the symptoms? One hears of

cases of Arsenical poisoning occurring among the operatives employed in the manufacture of certain articles containing Arsenic; but it is very exceptional to hear of serious cases of poisoning arising from the usage of such articles. Occasionally, as in the manufacture of lamp shades, continued contact with Arsenical paper, may produce symptoms of poisoning, in a few isolated cases.

(2) If due to the newness of the buildings, how is it that <sup>it</sup> has not occurred before in new buildings?

(3) The most prominent feature in the epidemic skin disease was the rash and exfoliation in all cases. In chronic Arsenical poisoning the skin is not always affected.

(4) In chronic arsenical poisoning paralysis more or less general is not of unfrequent occurrence - No cases of paralysis occurred in the epidemic.

(5) Although in some of the epidemic cases there was oedema of the eyelids, there was not conjunctivitis with suffusion and smarting of the eyes and dimness of vision.

which frequently occurs in Arsenical poisoning.  
 (b) The post mortem appearances in the skin epidemic shewed nothing characteristic - Fatty degeneration of organs, as is usually the case in Arsenical poisoning, was not found.

Having considered and excluded all the above causes, we are almost driven to the conclusion that the disease is the result either of an organism or its product, and that it is contagious.

The poison was probably disseminated in several ways.

- i By the air.
- ii By the nurses in changing the dressings
- iii By the patients coming in contact with one another. - There was a certain amount of carelessness about their clothing. On more than one occasion they were known to have changed shirts -

Dr Crocker at the London Medical Society's meeting of Nov. 30/91; was of opinion that the disease was due to an organism, or its product, probably the latter - He thought that it was of local origin - The poison settling

on some part of the skin surface, causing a patch of the disease which afterwards became general. He pointed out that eczema might develop from a single point, even when artificially excited. He had seen an ordinary blister prove the starting point of a general eczema. He raised the question whether it was a general disease like the exanthemata of which the eruption was only a part, or a disease commencing from without; the general symptoms being merely incidental.

There were facts in support of both views. He had noticed that there was enlargement of the glands in a considerable proportion of cases. The enlargement was not in proportion to the Dermatitis present. One case at Marylebone had vomiting and diarrhoea for 3 days before the rash appeared. On the other hand these symptoms were not constant and were very variable. In most of the cases the disease began on exposed parts. He pointed out that most of the patients being in bed it would be easier to infect other parts than if they were up and about. He inclined to the

view that the disease began from without and became general.

D<sup>r</sup> Savill sums up the evidence in favour of its being due to the presence of a specific living organism as follows:- (vide page 31 of his monograph on the epidemic at Paddington)

" i The definite course of seven or eight weeks through which the primary attack mostly ran.

" ii The symptoms of constitutional disturbance which attended the skin lesion.

" iii The marked general resemblance between them all was a fact which struck the most casual observer, and the inference, therefore, is that the cause, whatever it be, is specific.

" iv These three features in presence of a cutaneous eruption complete the resemblance to a contagious eruptive fever.

" v The serpiginous rings with which some of the cases started were almost identical in appearance with *Linea Circinata* a malady known to be due to a living organism.

VI The marked effect of germicides in modifying the skin lesion when applied at an early stage. The efficacy of collodion applied to and sealing up a patch in a very early stage, preventing its spread, is a fact having a similar bearing.

VII The wave like manner in which the outbreak rose and fell, strictly limited to the Summer and Autumn months of 1891.

VIII Clear instances of direct contagion are always difficult to establish; but it is worthy of note that seven of the eleven persons who, out of 193 healthy aged inmates of the Workhouse proper, contracted the disease, were acting as "helpers" or pauper nurses, tending on, and in direct contact with, patients already suffering from the complaint.

Further the fact that I and my little dog contracted undoubted attacks of the disease are particularly interesting in this connection.

IX The constant presence of a specific organism which I have discovered in the

" Serum and exudation; and which Dr

" Russell has demonstrated in the blood

" and tissues."

Dr Sarill describes this organism as follows:-

(Monograph page 33.)

" It is an aerobic diplococcus which grows  
 " on all media, and which does not liquify  
 " gelatine, at any rate, for a considerable  
 " time. The cultures have a whitish  
 " translucent appearance, like a thin  
 " layer of bluish white paint, a crescentic  
 " outline, and take two or three days to  
 " mature in the hot chamber, and five  
 " or six days in the cold. The organism  
 " bears some resemblance to *Staphylococcus*  
 " *albus*, but differs from it in not liquifying  
 " gelatin and some other points. Other  
 " organisms were of course present, but  
 " only this one was constant. Its constant  
 " presence and intimate relation to the  
 " tissue elements have led me to conclude  
 " that it is the specific organism of the  
 " disease, though its pathogenic properties  
 " require further investigation."

Dr Russell has discovered the same organism

in the blood, skin and other tissues of diseased patients.

A rabbit was inoculated by Dr. Savill with a pure sub-sub-culture. On the 5<sup>th</sup> day the ears and parts of the body became distinctly scurfy and red. This subsided on the 11<sup>th</sup> day the animal appearing in its usual health all along. On the twelfth day it died without any obvious cause.

Dr. Payne in his "Manual of General Pathology" speaking of "Staphylococcus Pyogenes Aureus" says:-

" Now it is important to notice that the  
 " same organism may be obtained by  
 " cultivation from the surface of the body,  
 " in most parts of the skin, especially, if  
 " dirty, and in matter from under the  
 " nails, and has been found in healthy  
 " mucus from the pharynx and in nor-  
 " mal saliva.

" In cultivations of various fluids from  
 " the skin it usually comes up along  
 " with other organisms.

.....  
 " There can be little doubt of this:-

"coccus or allied species being the cause  
 " of the suppuration which often super-  
 " -venes in certain cutaneous affections  
 " not at first suppurative, such as Acne,  
 " Herpes, Tinea, and in some cases :-  
 " Eczema.

.....  
 " Two other species, Staphylococcus  
 " cereus Alba and Staphylococcus :-  
 " Flavus, two species discovered in  
 " pus by Passet, much resemble the  
 " other forms, but in cultivation do  
 " not liquify gelatine.

In his description of the organism Dr. Savill  
 is not very clear as to the points of difference  
 between it and Staphylococcus Albus.

He says :- "it does not liquify gelatine; at  
any rate for a considerable time."

Further on he says :- "the organism bears  
 "some resemblance to staphylococcus albus,  
 "but differs from it in not liquifying gelatin  
 "and some other points."

It will be seen from the quotations from  
 Dr. Payne's work that Staphylococcus

*crena alba* and *S. Flavis* "do not liquefy gelatin" - He also says that these two species much resemble the other cocci, which there can be little doubt, cause the suppuration which often supervenes in certain cutaneous affections.

A good deal remains to be done before *D. Savill's* organism, can be differentiated from all those mentioned by *D. Payne* in the above quotations.

As to the nature of the disease looked at clinically many differences of opinion exist. *D<sup>r</sup> Stephen M<sup>c</sup> Kenzie* (Physician in charge of Department for Skin diseases London Hospital) at the meeting of the London Med. Society held Nov. 30. 91; was of opinion that the disease was an Exfoliative Dermatitis. He had published 21 such cases and had pointed out how these cases might be caused, the mode of origin being different in different cases. Some began as Eczema, some as Psoriasis, but there were also cases of general primary exfoliative Dermatitis. The interesting feature in these cases was,

that they occurred sporadically. These sporadic cases had been admitted into general wards; none of them had been communicated. He urged that there must have been some special conditions in the environment, to account for this outbreak.

He would be prepared to accept any Bacterial theory if sufficient grounds were shewn.

Some observers noted a remarkable likeness to Pityriasis Rubra in some of the cases and Dr Crocker and Dr Mc Kenzie both consider that Pityriasis Rubra may start as a kind of dermatitis.

Mr Jonathan Hutchinson described the disease as an Erysipelatous Eczema.

Mr Malcolm Morris suggested that the disease was a contagious eczema, taking on the severe and lethal form of Pityriasis Rubra by reason of the age and debility of the patients.

Dr Elkies says: - "Some of the cases may be described as Eczema, some as Psoriasis and a few as Pityriasis Rubra". (vide page 4 of his Monograph)

Dr Savill is of opinion that the disease is a new one -

He separates the disease from Erysipelas,

Rotheln, Pityriasis Rubra, and Gezeema as follows:— (vide page 21 of his Monograph.)

" Erysipelas. When the chief part involved  
 " was the face, or indeed any part containing  
 " much loose cellular tissue, the tumefaction  
 " of the parts, sufficient sometimes to close  
 " the eyes, bore a strong superficial resem-  
 " -blance to Erysipelas. But the gradual  
 " advent, the absence of pyrexia, the often  
 " vesicular nature of the eruption in some  
 " parts of the body, and the fact that the  
 " rash occurred in other parts in a more  
 " typical manner, were among the features  
 " which served to distinguish the cases from  
 " erysipelas.

" Rotheln. We have seen that the rash  
 " in eight males and six females began,  
 " with blotches, and these cases before the  
 " maculae became confluent, were exceedingly  
 " -ly suggestive of German Measles.  
 " But the eruption was too permanent,  
 " and very soon took on a vesicular or scaly  
 " character; and further, the absence of py-  
 " -rexia with such an extent of rash, almost  
 " alone served to distinguish these cases

from Rotheli".

" Pityriasis Rubra. The fact that the disease  
 " was an "exfoliative dermatitis" brought it  
 " within this class of malady, and all the  
 " cases belonging to the "dry" type had a  
 " striking resemblance to the descriptions  
 " of Pityriasis Rubra by Willan and Wilson.  
 " But in the first place my cases were  
 " evidently contagious, or at any rate occurred  
 " in the epidemic form, no mention being  
 " made of this in the description by these  
 " authors. Secondly, Dr. Living says, :-  
 " 'the affection (P. Rubra) is very commonly  
 " 'met with in children and persons pro-  
 " 'essed of a delicate skin and fair com-  
 " 'plexion'; whereas the great majority of  
 " these cases occurred in adults and  
 " old people. Thirdly there is the difficulty  
 " of reconciling the "moist" cases, which  
 " constituted the majority with the recog-  
 " -nized type of P. Rubra.  
 " Fourthly Living describes the skin in  
 " Pityriasis Rubra as not infiltrated or  
 " thickened, but in my worst cases the  
 " skin was very decidedly so, and in all

" There was distinct induration.

" Fifthly. P. Rubra may last several years,  
 " and is said to be a very fatal disease,  
 " but no mention is made in the descrip-  
 " -tion of either a definite course or epi-  
 " -demic occurrence. Nevertheless in some  
 " respects my cases tally with these authors'  
 " description of P. Rubra.

" Eczema.

" i The amount of dermal thickening  
 " and inflammation is certainly far greater  
 " than is seen in eczema of even a severe  
 " and protracted kind. It seems to be  
 " an essential part of all fully established  
 " cases young and old.

" ii The exfoliation of flakes of epidermis  
 " which occurred in both moist and dry  
 " cases, is different from any other skin  
 " disease, excepting P. Rubra and Scar-  
 " -latina. In not a single one of my cases  
 " was this feature absent.

" iii The definite course of 6 to 8 weeks which  
 " most of the cases ran is certainly a :-  
 " notable feature, they were, like Eczema,  
 " liable to relapse, but the primary :-

" attack had a definiteness which differs  
 " widely from the clinical history of:  
 " eczema either localized or general  
 " and which struck the most casual  
 " observer.

" iv In acute general eczema there is  
 " usually a certain amount of Malaise,  
 " but nothing like the constitutional  
 " disturbance present in the majority  
 " of these cases, and which resulted  
 " in a fatal issue in the large propor-  
 " -tion of 12.8 per cent.

" v Eczema attacks all ages, and espec-  
 " -ially the delicate skins of children,  
 " but this disease has been almost en-  
 " -tirely confined to persons at or beyond  
 " the middle period of life, not withstand-  
 " -ing the fact that all ages were exposed  
 " to the contagion.

" vi The occurrence of this disease in an  
 " epidemic form distinguishes it at  
 " once from any variety of eczema hitherto  
 " described."

The writer from personal observation of some

of the cases, and other considerations is of opinion that the disease is a new one. He bases his opinion on the following grounds.

- i The more or less constant duration of the disease for six or eight weeks.
- ii The presence of exfoliation in all cases.
- iii Most important of all its Epidemic character.

Further certain negative considerations are important.

- i. The exemption of children from the disease.
  - ii. So many observers some of them specialists in Diseases of the skin attempted to classify the disease and place it under the head of some already recognized form of disease. In their attempts to do so they exhibit a marked variance of opinion, which one cannot understand on the assumption that the disease is an old and long recognized one. If the disease is not a new one. Why this difficulty in diagnosing it? It certainly does not lie in want of material.
- But one thing is certain, and all the authorities mentioned above are agreed that the disease in an Epidemic form is a new

one; and certainly in this sense if in no other, the contention that it is a new one must be upheld.

If it is an old disease which has taken on an epidemic form, then certainly it is an old disease plus some factor, and a very important one, which did not exist before.

It cannot be said that a suitable field of action had not before existed, because as Dr. Savill has pointed out the London Infirmarys or Institutions similar in their nature have existed for a very long time; and it was reserved for the newest and best equipped Institutions in London to be the sufferers.

It is difficult to see why there should not be evolution in disease as well as in other directions.

The gradual change taking place in man-kind, mental and physical, must one would think, in the course of time render them susceptible to influences which previously would have had no effect.

It would seem therefore, that as the result

of evolution, a new organism has been developed, or else an old one has taken on new and more active properties.

We see as the result of the steady advance of civilisation, certain types of epidemic disease being stamped out and left behind in the struggle for existence.

Surely it is not unreasonable to expect: that new ones, though we will hope, less virulent in their nature will arise to fill the gap.

### Morbid Anatomy.

This may be described in a very few words. An inflammation of the true skin; the cuticle separating in flakes or scales.

Dr. Sarill found Hypostatic congestion of the lungs in most of the fatal cases. But this occurred in old people, bedridden and: possessed of feeble circulations, so that this cannot be considered a feature of the disease ~~per se~~.

Dr. Lunn stated that several autopsies: were made by him but nothing characteristic

was found.

D. Colkins says in the only autopsy - which he made there was congestion of the mucous membranes of the small Intestine.

In one case D. Savill found a leathery film from the middle of the Ileum to the Rectum. Congestion of stomach and Intestines in several cases.

### Symptoms.

Premontory. In many of the cases there was a marked falling off of the appetite. In some a feeling of irritation of the skin before the rash appeared.

Others experienced pains across the loins and down the limbs for some days.

In some few cases there was diarrhoea and vomiting before the rash appeared.

### During course of attack.

The constitutional symptoms varied according to the extent of the skin lesion.

There was much prostration in most of the bad cases. In some sleeplessness was very marked.

The temperature ran no distinctive course.

It rarely reached  $102^{\circ}$  and in most cases kept under  $100^{\circ}$ . Very often subnormal.

The subjective symptoms were, intense

itching, in most cases, in others a burning stinging pain.

### Integumentary System.

As a general rule it may be said that the first noticeable symptom of the disease was the appearance of the rash. The preliminary symptoms described above were not at all constant and were very variable.

The eruption may be said to be the primary symptom and all the others secondary.

The rash commenced most frequently on the arms, head, or face; less frequently on the trunk. The first appearance of the rash was that of a general redness of the skin, with papules going on to vesicles.

The epidermis was undermined and cast off in scales or large flakes. The larger flakes of epidermis mostly occurred where it was thickest as in the palm of the hand and the sole of the foot. In some cases complete casts of the hand were obtained.

Exfoliation of the epidermal structures may be said to be the most characteristic feature of the disease. In many cases the hair and nails were shed.

The rash invariably began as a small patch and the disease seemed to spread from the starting point until sooner or later; in quite half the cases, the entire body was covered.

In many cases there were several distinct patches in different parts of the body; but in no cases did separate patches appear simultaneously; one patch always following another thus coming in contact with it.

In other cases certain portions of the rash would fade giving rise to a patchy appearance.

In some cases the rash was of a dry character the papules persisting, and the cuticle coming away in small flakes; the general appearance of the patient in this type of case being that of a "boiled lobster".

In others there were large weeping surfaces resembling an ordinary acute eczema.

In some there was a purpuric condition present underneath the other eruption.

Boils appeared in several cases, usually

in the later stages of the disease -

There was a great tendency to relapse.

The rash dying away and then suddenly breaking out with redoubled vigour -

The new skin which was formed after the subsidence of the rash was of a shiny appearance and in some cases there was a good deal of dark pigmentation present.

The average duration of the disease was seven weeks -

#### Alimentary System.

Loss of appetite very general; and very marked. In some cases great thirst.

The tongue at first furred afterwards red and raw and sore. (Sometimes bloody.)

Vomiting and diarrhoea occurred in many cases; sometimes before the eruption, sometimes after the eruption but early in the disease, at other times at the end of the disease -

#### Urinary System.

Albuminuria occurred in 50% of the cases, according to Dr. Savill; It only occurred when considerable extent of skin surface was involved.

Nervous System. Marked irritability and

sleeplessness.

### Hæmopoietic System.

In many cases there was enlargement of lymphatic glands, but no suppuration - No enlargement of the spleen was observed. (In one case after death.)

### Circulatory System.

Nothing special relating to this system. The heart became weak in most of the cases owing to the general prostration.

### Respiratory System.

Pleurisy and Pneumonia occurred in a few cases.

The termination in all the fatal cases was much the same - Profound weakness followed by drowsiness, deepening into coma. The patient generally retained consciousness till within 24 or 48 hours of death.

### Prognosis.

At the St Marylebone Infirmary there was a death rate of 5%.

At the Paddington Infirmary 12.8%.

At Greenock. 13.5 %.

At Hanwell out of 38 cases there were no deaths.

Too much stress must not be laid on this high death rate. When we take into consideration the class of individuals attacked, their age, and general bad health, it is not to be wondered at that the mortality was high.

The patients at Hanwell were insane but otherwise healthy & this would account for the mild type which the disease assumed there -

In 18 fatal cases the average age was sixty four.

Out of 14 fatal cases three were found after death to possess healthy organs - Of the remaining 11; three had Granular Contracted Kidneys; eight had cardio-vascular degeneration to an advanced degree.

### Treatment.

Isolation was tried at the Marylebone Infirmary, but without any success, according to

D<sup>r</sup> Lunn - But with reference to this statement it should be pointed out that the epidemic nature of the disease was not suspected, at first, and it really got too much of a footing to render isolation of any avail -

In the opinion of the writer Isolation if rigidly and promptly carried out, would in all probability have cut short the epidemic. It should certainly be made to play a more important part in future.

In the early stages of the disease painting with Tincture of Iodine was found very efficacious -

D<sup>r</sup> Lunn specially recommends painting with collodion, when the affected area was of small extent.

When the disease is at its height and a large extent of skin involved, lotion of the following nature is very useful:-

R/	Lixigated Calamine	grs	40
	Juic Oscide	grs	20
	Glycerine	m	20.
	Water	℥	ʒi

If to this some Liq: Carbonis. Detergens be added, it formed an excellent lotion

for alleviating the intense itching which occurred in many of the cases.

D<sup>r</sup> Sarill speaks highly of a 1% lotion of Eucolin - Also warm soda baths for relieving the irritation.

Stimulants were required and were of great service in many cases -

(For notes of cases see next page.)

Notes of cases from the records of the  
Paddington Infirmary, published by  
Dr. Larill in his Monograph.

Case M. 1. - P. R. —, aet 70. a tailor, admitted  
on Jan<sup>ry</sup> 91. on account of Left Hemiplegia,  
and a severe Burn on the paralyzed leg.  
No antecedent history of Gout or skin disease.  
On March 14<sup>th</sup> he was the subject of an attack,  
which resembled in all respects acute general  
eczema, commencing on the back, and rapidly  
involving the whole body. By the middle of  
July he was nearly well of this, but on July  
28<sup>th</sup> a drier eruption attended with more  
thickening of the skin, started on the back,  
and spreading to the abdomen, face, and  
head, rapidly became general. It began  
as a papular eruption and went on to ex-  
foliation without much exudation anywhere.  
There was a great deal of irritation and  
occasionally a feeling of chilliness. The  
temperature with few exceptions was  
normal or subnormal. Later on he had  
a localized consolidation of the lung, but  
he rallied from this and ultimately died.

in a state of coma with suppression of urine. The temperature in the last seven months of life was subnormal. Duration of eruption nearly twelve weeks. The constitutional symptoms in this case consisted of extreme loss of appetite, so that it was most difficult to get the patient to take even fluid nourishment; and gradually increasing prostration so that he was unable to move about. Towards the end of life the respiration was considerably embarrassed and the subcutis tendinum was very marked.

Treatment - Internally Quinine, stimulants, benzoate of ammonia. He rallied considerably when put on whiskey. Externally Ung. Ox. Zuc, lot. calaminæ, lot. creolin, vaseline. No marked effect of any.

At the autopsy, signs of pneumonia in both lungs, kidneys fairly normal for his age. Haemorrhagic extravasations in the stomach and small intestine.

There was a leathery filio covering the mucous membrane, from about the middle of the Ileum to the rectum.

William B. — aet. 73. a gardener. admitted  
 April 13<sup>th</sup> 91. on account of Cardio-Vascular  
 disease. He died on Sep. 14. 91. There was  
 no history of skin disease, gout or other pre-  
 disposing cause. In the latter part of May  
 a dry "eczematous" rash appeared on the arms  
 and legs. It remained in that condition  
 for about eight weeks, and then faded away,  
 no constitutional symptoms attending; on  
 July 28<sup>th</sup> the rash returned, involved other  
 parts, became more severe, was purpuric  
 in places, resulted in extensive desquamation  
 and after involving the whole body again  
 faded. This time there was loss of appetite  
 and prostration, so that he had to take to bed.  
 In August he relapsed, and almost the  
 whole body was simultaneously affected  
 with a papular eruption at first discrete,  
 and then becoming erythematous-papular,  
 with considerable thickening of the skin,  
 which had not occurred in the two previous  
 attacks. This went on to profuse exfoliation  
 with here and there the formation of vesicles  
 and exudation. The hair came out, the nails  
 were affected, the appetite was lost, and the

prostration extreme. The crimson skin continually shed its epidermis, the eyes were severely inflamed. The rash had almost cleared up when this patient died - The fatal termination was the result of extreme prostration - It occurred somewhat suddenly and was finally produced by cardiac failure, the mind being quite clear to the end.

Autopsy. Middle sized and smaller arteries thickened. Heart dilated. Lungs congested.

Jesse T. Oct 49. Admitted April 22<sup>nd</sup> 1890. with Charcot's Joint disease - He had enlargement of the left knee joint, crises gastriques and doubtful pupillary signs - He was in his usual health in June, when a dry eczematous rash was noted (29<sup>th</sup>) on his face, which rapidly spread to the neck, back, arms, and hands; in places it was blotchy and in places papular. During July the rash was never extensive & seemed as tho' it would get better; but at the beginning of August it took on fresh activity.

Aug. 11<sup>th</sup> Feet legs and thighs considerably swollen, pit deeply, covered irregularly with desquamating red patches. Eruption uni-

-versal; scales small and thin; back sim-  
 ilarly affected, except central part, which  
 is free. A good many round patches fading  
 in centre and spreading at margins on  
 sides and shoulders. Front of trunk fur-  
 furaceous, redness having faded, very  
 little exudation except at flexures. Skin  
 of arms a good deal thickened, and es-  
 pecially over hands; here and there a good  
 many deep fissures. Face almost recovered.  
 Vomits occasionally, but less during last  
 month than before. Appetite poor, pros-  
 tration considerable.

Aug. 18. Relapse on face. On legs rash is not  
 vesicular, nor papular, but consists of reddened  
 patches with well defined raised margins of  
 a serpiginous character. In the latter part  
 of the case the patient had three attacks of  
 dyspnoea, lasting ten to twenty minutes, the  
 cause of which was not obvious. Towards the  
 middle or end of September the rash faded, having  
 lasted about ten weeks, leaving oedema,  
 pigmentation, and a good deal of irritation  
 of the skin. Finally he recovered.

The temperature in this case was interesting

Generally subnormal in the morning, and about  $99^{\circ}$  in the evening, with one rise to  $102^{\circ}$  (Aug 10). - But during the latter part of the case, and for a long time afterwards, the temperature was subnormal, both morning and evening, often as low as  $96^{\circ}$ .

George. H. aet 82. admitted Nov 25/90 with Bronchitis, dilated right heart, and double rupture -

He had never had any skin affection before - He was a feeble old man though up and about daily. On July 4<sup>th</sup> the eruption started with papules on the hands and face, and rapidly spread to other parts. Nine days later it got a little better, but only to renew its attack with redoubled vigour. On the 30<sup>th</sup> day Aug 3. no part of the surface free from eruption - Tongue also desquamating red and raw - Conjunctivae red; semipurulent discharge. Skin of face very tender. The dermal inflammation was very acute in this case; anorexia and prostration extreme - By 34<sup>th</sup> day albuminuria

appeared, and the exudation which had formerly existed ceased. On 35<sup>th</sup> day the case was seen by <sup>\*</sup>Mr. Hutchinson who said it was then like typical pityriasis rubra.

Aug 13<sup>th</sup> (40<sup>th</sup> day):— He has been very low all day. Sordes on lips and tongue; hands twitch constantly; breathing rapid; skin feels hot; has double incontinence; exhaled a bad odour. Temperature which has all along been normal or subnormal has been gradually going up to 101.4. Next day he died six weeks from the commencement of the disease. At the autopsy made thirty six hours after death, the heart wall was found to be degenerated, but the other organs were remarkably healthy for his age. The kidneys weighed each three ounces and, beyond <sup>inter-</sup>congestion were normal. The case was a very severe one and death took place by asthenia. This was the only fatal case in which the temperature went up before death. In the others the fatal termination was heralded by a sub-normal temperature for several days—

Sophia W. — Oct 81. was admitted on June 30. 1890. for Arterial Disease and a curious condition of Hemi-ataxy. She was getting up daily when, on June 20<sup>th</sup>, raised erythematous blotches were noticed on the right elbow, which became scaly, without exudation. Here the rash remained localized and gradually faded till only redness was left; but on the 9<sup>th</sup> July it appeared on the face in a more severe form, soon after reappeared on the arms (both together this time) and gradually became general, by spreading from above downwards, the legs being last to be attacked and only slightly.

The primary attack lasted nearly nine weeks. The rash was dry and exfoliative throughout, attended by great weakness and loss of appetite, by slight albuminuria, occasional vomiting, diarrhoea, loss of hair, and slight elevation of temperature (to about 99°) It was followed by a slight relapse. The patient however never rallied from the weakness; pulmonary congestion supervened and she died on October 4<sup>th</sup>. At the autopsy the arteries were much degenerated.

Emily O'G — aet. 60. admitted May 13.  
 191 for aortic valvular disease. The rash  
 first appeared on August 10<sup>th</sup> on the back  
 of the right hand, as two flat papules,  
 which enlarged into erythematous rings  
 surrounding a depressed area covered  
 with tiny vesicles, barely visible to the  
 naked eye. It was spreading rapidly  
 but the prompt application of half per-  
 cent creolin lotion effectually checked  
 it, and resulted in a rapid cure.  
 Three weeks later patches appeared  
 (this time symmetrically) on the forehead,  
 knees, ankles, and elsewhere, each sur-  
 rounded by discrete papules, and at first  
 it was thought that the eruption would  
 get the mastery, in spite of the application  
 of the creolin lotion, but perseverance  
 and slight increase in strength in this  
 solution were successful in curving the  
 disease, without its becoming general,  
 and without any severe constitutional  
 symptoms.

The above six cases were taken at random from those published by Dr. Sarill-

The following five cases were published by Dr. Elkins in his monograph as being typical of those occurring in the Greenock Epidemic.

### Case I.

Wm. N., æt 49. Early in Dec. 1888, he complained of a slight but very irritable "eczema" of both legs and thighs.

He was at this time in fair health, and was acting as wardman of one of the infirm wards. Chronic rheumatism had impoverished him. On December 23<sup>rd</sup>, 1888, he was found to be suffering from general "eczema" accompanied by much itching. He was treated with tar ointment, Fowler's solution and careful dieting. The eczema covered the whole body, and was exceedingly angry looking and very itchy. In the end of January, and beginning of Feb-

- many large flakes of skin separated especially from the feet and hands. Lauoline, oleate of lead, and various other remedies were tried, and great care was taken with the diet. He became exceedingly weak and gradually sank, dying of exhaustion on February 22<sup>nd</sup>, 1889. For two days previous to death he suffered from diarrhoea.

Case II. - Robert P., aet 51, admitted to the Poorhouse on November 29<sup>th</sup>, '88 suffering from left hemiplegia. In the end of December 1888 he began to suffer from "eczema" of the arms. This became general, and soon desquamation occurred, large flakes coming away. He was treated with various remedies, such as tar ointment, vaseline, alkaline baths, oleate of lead, lauoline &c. The eczema was getting much better, but his strength was declining, his pulse being very weak

and irregular. On February 21<sup>st</sup> 1889, he had most profuse perspiration, and died apparently of exhaustion.

Case III. — James B —, aet. about 50, admitted to the hospital from the infirm wards suffering from an exacerbation of chronic bronchitis. On November 10<sup>th</sup> 1888, he was sent back to the infirm wards. The bronchitis, however, got worse, and he contracted "eczema", so that he was sent back to the hospital on December 24<sup>th</sup> 1888. Under treatment the "eczema" sometimes showed improvement, and then relapsed again. On March 1<sup>st</sup>, 1889, extensive desquamation was occurring. He gradually got weaker and weaker and died of exhaustion on May 25<sup>th</sup>, 1889.

Case IV. — Duncan S —, aet. about 57, admitted to the hospital January 28<sup>th</sup>, 1889, suffering from "eczema",

of the face, arms, and legs. He had previously been under treatment in the infirm wards, and suffered from chronic rheumatism. The "eczema" resisted treatment of various kinds, and became general. There was a good deal of the peculiar desquamation described in previous cases.

On March 1<sup>st</sup>, 1889, his appetite was very bad, and he was becoming very weak. The "eczema" was then not angry looking, and desquamation was occurring. On March 4<sup>th</sup> 1889, he had persistent vomiting, his extremities became cold, his pulse could hardly be felt, his abdomen was tympanitic, and mentally he was confused and drowsy. Under treatment these urgent symptoms passed away, but on March 8<sup>th</sup> the vomiting returned, the vomit being streaked with blood. Diarrhoea, too, with bloody stools set in, and he died on March 9<sup>th</sup>, 1889.

Case V. Archibald R——, aet. 59,  
admitted to the infirm ward November  
25<sup>th</sup>, 1888, suffering from chronic  
bronchitis and chronic rheumatism,  
for which he was treated. In the  
middle of January, 1889, "eczema"  
appeared upon the face, and rapid-  
ly affected the whole body. A great  
deal of desquamation occurred.  
In spite of treatment he became very  
weak, and died after some diarrhoea  
with bloody stools on February 24<sup>th</sup>, 1889.