The Early Diagnosis of Small Pox

Graduation Thesis 1902

Thomas Evans M.B. M.S. 1894
The Early Diagnosis of Small Pox

To prevent the spread of Small Pox we must have recourse to vaccination and revaccination combined with the isolation of every case of Variola at the earliest possible moment. As vaccination is not universal the vaccinated state of a community is unreliable and isolation therefore becomes of the first importance. So be of service isolation must be prompt this depends upon Early Diagnosis. It is well known that the majority of cases of Variola sent to the isolation hospital are fairly well developed before they arrive there owing to delayed uncertain diagnosis. This is not to be wondered at considering the very few opportunities medical men have of seeing cases of Small Pox and the many different types of cases which occur during the same epidemic. Men of great experience in the study of Variola readily admit that apart from epidemic times they may easily fail to diagnose a mild case of Variola. No difficulty presents itself in a typical case of Variola Vero but in malignant cases on the one hand and mild cases on the other it is at times most difficult almost impossible to say with any degree of certainty that one is dealing with a case of Small Pox. Delayed diagnosis, wrong diagnosis and cases missed altogether account largely for the present spread of the disease in London. So the delayed diagnosis prevented the disease of a case of Peroniea Variolosa I saw an outbreak at a workhouse in the City Road Workhouse London at which I am Resident Medical Officer. It does appear strange that a disease
In antiquity, almost consistent with the human race should
give as much trouble to the physician of today so much
harder to recognize it, but still more strange does it
appear to me that the disease which gave birth to the
Theory of Contagion Virions should defy all bacteriological
methods of discovery. I am much tempted to take
a rapid run through the various stages of the
Ancient and modern history of this disease, but it is foreign
to the object of my Thesis.
The ambition of every medical man who is brought
face to face with Small Pox whose infection is so subtle,
is to be able to recognize its attack at the earliest possible moment
and check its spread by early isolation. Medical men
who have never seen a case of Small Pox have an idea
that a patient suffering from true Varieola must present
a ghastly picture, in which the head is covered with
typical papules Varieolae, the general condition one of
great prostration. In the transmission stage I believe Varieola
Vera + Varieola Contiuous are the rule. Variola vera or Varieola
the exception.
I propose to give an account of all the cases of Small Pox
which have come under my notice in this Workhouse, and draw
attention to some facts observed by myself which, I think deserve
sufficient emphasis or no mention at all.
It is not my object to give an elaborate description of
the typical disease or its various anomalies but to give
briefly the most facts as observed by one from the time
my attention was drawn to them to the time of their removal
by the Metropolitan Asylum Board Ambulance.
There are so many excellent works on the subject which give
most minute and most precise and accurate descriptions
of the disease at all its transitional grades, but none is apt
On Nov. 4th, 1901, William Boody, 1st, entered into the Receiving Ward having been admitted on a Receiving Officer's order. I happened to be in the Ward at the time and noticed that he had some spots on his forehead and he himself appeared ill. I had never seen a case of Small Pox before but the man being apparently ill the spots being on his forehead aroused my suspicion and I had him immediately isolated to examine him more carefully. He had been ill for 2 or 3 days and his chief pain was in the back. There were no complaint of illness. Temp. 101.2. Pulse quiet. Respiration: 18. Although he was able to walk he was very uneasy:

Cranium: chiefly on forehead. few small spots on exterior

Surface of forearms: One in English palm: similar around both wrists: around in break on upper arms & lower end of legs: no papules on feet: no spots on face. The papules on forehead were large, rounded, & corn were present.

There were two whitish papules on the mucous membranes of each cheek.

The man next among to Hospital Officers as a case of Small Pox was dated.

The following afternoon George Day, 1st, from the same common lodging house as the case No. I, was admitted absolutely covered all over with small pimply sores. These did not appear to be any part of the body more affected than the other, they all appeared to be of a uniform reddish character & compared with the other case I had
On the 18th December 1901 Margaret Tempe 39 was admitted on a Medical Officer's certificate as suffering from amenorrho. When I saw her she complained of loss of blood from vagina which she presumed herself as being a lot like her sister died at her age of which she died. She was excited and her face was flushed; she said she had been drinking her pilsims on full proof. Temperature Temp. 100: She was very uneasy and had a feeling that something was going to happen; he mind was quite clear. She was told to keep quiet and not run about: she was reported as having had a good night. In the morning (19th Dec.) she said she felt better. The haemorrhage was less; she appeared more composed but face still flushed. Temp. 101. No sign of rash or spot of any kind visible. Saw her again in the morning when she complained of pain in her side. Other than this thought was due to a slight swelling which also in my opinion accounted for the slight rise of temperature. During the night she was very restless right up to last of the second time but was quiet and mentally at
6th 2nd morning. I saw, called to see. He found
his dead. I was there almost at the moment of death. I
noticed numerous haemorrhages chiefly on the chest. This
led me to think of the possibility of smallpox but with
my little experience I could not make a diagnosis. Almost immediately after death the whole of
the epidermis stripped off. The hair of the head came
off on the slightest touch.

I made a post mortem examination very much strove
with the head and which the epidermis stripped off.
There was a distinct bright red scarlet blush in nose
from which did not extend higher up than the
outside appears to be limited to the skin in a
Scorpius triangle on each side. There was also a
similar blush in the axillary region. Over the arms,
legs, slight over the thigh. There were enormous haemorrhage
spots. No haemorrhage on face or forehead.

Head. On removing the scalp the brain came out in
beautiful. Up to this stage I thought death must
have been due to some minute injury.

Brain was almost semi fluid in consistence. It could
not be taken out whole. No haemorrhage.

Throat. Recent pleurisy or Rupture. 6 oz. of blood.

Right Pleural cavity. Lung totally abnormal
Slight engorged with blood.

Left Pleural cavity contains 16 oz. of this dark red
coagulated fluid.

Heart. Pale & Flabby. No fluid or pericardium.

Abdomen. Some (small quantity) of this fluid in the
caecum. The abdomen. The liver, spleen, &
pancreas, Showing no haemorrhages but here
pale & Flabby.
A case occurred at the Shoreditch Dispensary a few weeks ago in which the haemorrhage started from itself in a peculiar manner. A man who had been in the wood some time suffering from suppurating glands in the spine returned, reporting good progress toward recovery, and left his bed to go home. On the way the pains in the back and other symptoms reappeared, and he was still in considerable pain one week after when he was allowed to leave. He noticed that he had some petechial spots on his abdomen before death. The case was one of diarrhoea, and only after the first motion did the man die, the pain and other symptoms having disappeared.

In another case the diarrhoea was constant and continued for several weeks. The patient's condition was very critical, and he was placed in the hospital, where he remained until his death, which occurred after a prolonged illness.
On the 1st Jan 1902 - (12 days after the death of Mrs Kemp) Robert Chris 63, who assisted to carry the body of Mrs Kemp to the mortuary, came home complaining of a peculiar rest in his leg's, arms and feeling at all well. Immediately isolated him examined him carefully. He had a rigor 101° fever in the body. He must have had a small cut on his hand. He had a tellatome: 'tetanus' on which he had from the attendant. The rest on muscle on the arm they only turn up. A mental character, rose red measles.

In the evening of the same day interviewed on or two times in the room to set him away on the same condition.

N.B. These 'tetanus' were observed the evening of the same day in which he first complained.

The mental part was still on his arm & leg. The man who assisted to carry the body showed tellatome at the first moment and his hand remained but some.

VII
On the 3rd morning (1st Jan) - Eliza Murphy 63 was taken suddenly ill. Temp. 104°: complained chiefly of headache. No nausea or retching. I saw her a few hours after and noticed two small red spots on her forehead, then in breast once. Next I went to the breakfast table to have determined the next line in the next bar to save No 3. Twelve days intervening. I renewed her in the evening for more spots, found one while in bed, no more. Next morning her lemons on the table belts & a few more orange spots were found on the body. As
This was at 8 a.m. The wound was clean & dry at 8 a.m. My impression is Smell-P is not been
her & mamma + popular + supported. Newmont's
Next day hair & urine normal + few some amou-
popular, developed -- I sent her away to the
Lord Prov Hospital. He fell quiet well when
she went away on the 3rd day but I found on her
return that she developed a great many more
popular symptoms on the face.

A.B.

Although one or two patches of ulcer were noted I believe it could be found after within 24 hours of the onset. The reaction in this illness may be delayed.

VIII

On the same date (11th May) I have saille 32 - a patient
on the bed was unquiet with an old ulcer of leg +
another on taken suddenly it will vomiting, backache
headache + temp 103; he was quite prostrate +
very sick. There was no hospital in contact + hence
I am not a case of Smell-P. Next morning he
was still very sick temperature 103
Pyrexia - Temp 104 + now 3 months 2 or 3
glass red spots which gave a slightly feel to
the patient + similar spots in the urine: one
at 2 + one in the left palm + one near the
base of big toe in outer sides. I shall not
examine his name this one. Sent him away to
the Hospital where he died from the disease.

M.B.

Persistent sickness, great frustration. Appearance
of infection went to and disappeared on 2nd day.
IX

On August 2nd, Rachel Stanley 44, was taken
suddenly ill with pain in head, fever, headache.
Thurs. 104. Became worse. Go astray. Some fever
on 2nd day: Thurs. 104. After 3rd day began normal
4th day's temperature. 1st in palm on 3rd day in
mean, small; the 4th in mean surface of forearm.
1st in 2nd in back.
Sent to hospital on 14th January.

Mrs. No popular disease like the 3rd. Then only
a very few were small, some new. Some very
slightly seeming them not. Patient fell quite
well. Apart from having vertigo, some
numbness of face.

Mrs. Mary Thomas 19, was taken suddenly ill with
headache, chill. Headache. Thurs. 103. On the 2nd day of illness
saw man in his mind in front of an oarsman in
boat which another developed and two together.
Sent to hospital.

Was the effect of communication with No. 3. It
manifested on the 3rd. Patient did not
communicate until the next day, on the
communication from No. 3.

So far nothing more strange noticed that
the spirit was never outspoken but always
seem averse to being asked to speak.

Replaces the spirit in the palm of the right.
On the 11th day, 1902 James Frate 47 walked in here with a nearly dead all over him. He had under his left side way from Portsmouth to London that slept at several nights. He appears tired till: Time 100. He came with a dark reddish red fluid on his body. teammate for trains all over but did not localize back. Had been sick in the morning before a chimney. Did not diagnose the case but thought it wise to send him to the hospital ward. Next morning he; Time was 100. He appears of anything but more comfortable but the back up more troublesome. I went to see him with Mr. T. Prof. of few large flat elevations in the palm and apparent superficial he took came to the conclusion it was not syphilis because there were no papules to be seen but what it was he never could say. He had no vomiting and no nausea but a general illnless. On the 12th his face became fuller. Conjunctiva injected, Whilst hunny above. Tenderness. Palpation bruises from mouth. His hands stained with blood. He also began to quit. A most offensive odor. His mind went quite clear. The rash on his parent. He said in his voice. He spread this appears true that syringe elevation. They appeared to me very near the end of the mulberry he found all over the neck. I think cotton case half for a popula but end
My deputy had made up my mind that there
was not a case of smallpox because we saw no
poxes. It was so different to anything I had
ever seen. I was humbled when I found out
I had been daily interpreting the development of
a case of Pindura Varicella & did not recognize
it. I was consoled when I read a newcomer,
"The Novitiate of a Medical Man who has
never seen a case of smallpox, but who
saw several cases under smallpox,
so different from the ordinary type of
smallpox in Pindura Varicella; that no
one without an intimate
knowledge of the circumstances especially without
an acquaintance with the prevalent epidemic
can define with certainty the true
Pindura Varicella, and the
cases of the clinical symptoms under Varicella
so different from the normal under the influence
of the disease appear in most of its variations.
My one object was to judge one empirical formula
but there was not one to judge on the same
principle that Dr. Wood used that
the fine small red material does not usually occur
in Pindura Varicella. At Edmonton the same
mental attitude in the minds of doctors,
resulted in a more severe
outbreak.
On the 25th November 1882 this man, 39 years of age, was admitted to the hospital with the complaint of feeling ill. He had been complaining for a long time of severe pain and dyspnea on exertion. He had lost a great deal of weight. He had a temperature of 103°F. Pulse 80 and regular. Respiration 24 per minute. On examination, I found one deep, central, emphysematous bulla in the area of the right foot bone in the left foot, and a few more others both on the right and left sides. I think these were the result of severe injury. Symptoms included a cough and a slight fever. Within 36 hours, the man showed a few symptoms which might have been pneumonia. He was no better. He died next day.
On the 20th January Thomas Wallace 76, an inmate who arrived
to examine the clothes of the patient was taken
suddenly ill with backache, headache, no sickness. Temp 103 3/4.
No other notice. Next day in the early morning he was
again examined and one spot was seen on the back. 1st Mr. Ramsey
threw himself on the sudden appearance of wound and one
a left posterior moisture, he was in quite health
prior to the overt he died a week later.

Note. A few papules were seen within 45 hours of the trial
which was sufficiently típpred in character, attributed
to have patient sent away within 48 hours of overt.

Inmate to examine his nearest moisture membrane.

XIV

On the 28th Benjamin Woodlawn 68 was found in the Pooby
room with his bald head covered with small purple
painful red papules, face quite a guilty feeling
of the head when questioned them. He tried to avoid
explanation nor going to explain. He admitted
having felt ill a day or so before. Temp in the chest
101. Made no reference to pain in breast but
had been with the chest before.

There were no spots on any other part of the
body. Sent away same afternoon.

Note. The overt in this case was not very severe although
quite early the had very numerous spots on the back, and
in the chest, he detected no serious alteration.

These papules were round and dark in color not very bright
in color; the wind was another cause there.
On the same date (28 Jan) John Burnett 65 complained of being ill with headache; right backache; no sickness.

One papule was slightly indurated seen on forehead. Next day one or two small purple spots of extension on face of forehead.

The Randum mucous membrane; one or two small purplish.

Sent away on the 29th.

Noted. This patient went away within 48 hours; had only a slight cough, felt all well. In all these cases one or two are surprisingly typical to me and some experience to justify removal of small spots.

XVI

Henry Page 76 (on the same date 28 Jan) came to me in the morning complaining of being very queer saying that he was all right the day before. I ordered him to have coffee then under observation. He had a temperature of 104. General measures did not bring much change in a week or two, or three. The last note was that the nervous. One in the lumbar spine, with a purple and red macula on anterior surface of lower end of right forearm. Next morning two more or two papules in forehead time in active and rosy. He was sent
VII.


XVIII.

On the same day (29th) John Carroll, 78 in Body 9. Fever of 103. No cause. He was sent away on the same day. 29th.

Note: Within 30 hours the iron blisters appeared on his arm, back and neck. He was sent away on the same day. 29th.

Note: Within 30 hours the iron blisters appeared on his arm, back and neck. He was sent away on the same day. 29th.
XIX

Same day 29th Jan. Harriet Searrod by writing in the evening on Tuesday suddenly ill with whooping cough and headache & stiffness. Temp 104. Next morning one or two papules were seen in various parts of the arms. One night before, one or two in a mumps in right hand. None on forehead.

Note that given a case of sudden illness with league pains like during the day & feverishness develop during the night.

In order to make a diagnosis of smallpox.

XX

Same date (29th Jan) John Stoddard 71 from Fishtail.

Home with headache, no headache, no stiffness or papule had occurred when first seen. Temp 101.7 also one papule in left knee & mean mend. Next morning developed one in face & two or three on abdomen everywhere. To-morrow: am 2.3 in breast. Home from under.

No to -2 on abdomen everywhere. V. Largo.

Sent away on the 20th.

XXI

Same date (29th Jan) John Fielding 66 from Fishtail. Home in town suddenly ill with pain in the back & head. Temp 103.7. No stiffness. He had a scarlet rash on face & body generally. Breath seemed labored. Face hot. No thirst. No nausea. No papule. Next day (morning) one or two papules on forehead, one on small corner of face, one on inner lip. None in pomum or palate.
This is the page upon which the Scutari proclamation first appeared, it faded the next morning as the popular enthusiasm of Scutari disappeared.

XXII.

Saw daily Walter Driver 18 from Bodie of Horse Company with Scutari complaint of not feeling well. No distinct symptoms except headache and general malaise. His hand from time to time with the Scutari rest.

The next day began found to be suffering from small pox being covered with small dark-potted pustules all over the body. Most marked on face & feet and the mind with that of Scutari. But not just ill this time. 89 4

Sent away on the 20th.

Note: The symptoms of Scutari in this case put me in mind at first particularly a few similar symptoms were slight. I believe if I had looked carefully the right previous duties have discovered more typical forms for it.

XXIII.

John Bickmore 72 in the 30 days complaint of feeling very ill. loss of appetite and not able to be spoken to. Headache & vomiting. Temp. 103. Had a distinct pimple in forehead not popular seen before. Head not examined this because bruised. Made several observations and vomiting he then took me - his pimple a little dead & one in palm no marks or other unusual. They had 102. Were examined on the 13th day.

Mrs. Jones with pustules was away a few hours after the usual bed-knitting was two or more 89 4

Her two Annie returned looking very fit but much ill.
Superficially all over. The worst a little while at five o'clock in which he stated that he was quite aware to run and away with pure spirit because he would be remembered.

XXIV

On the 30th Day, Mary kept her pan #1 from the liquid in and removed after delivering an hour and then fell ill with nausea and urine perversely followed by temp. 106°. Pains in head tissue. No vomiting. Am immediately removed to isolation ward. Next morning felt better, but no spirits. Temp. 102. In the evening the head one or two popules in anterior and force of fever and I palon; then for a break.

1st tent away 31st Day

Note: This woman did not have many signs except that the membranes were very thick and a few after the return from the farm.

XXV

On same date (30th Day) Frank Edwards 37 from Body of Stone run to London sick ill with pain in head tissue. Temp. 104. No popules present.

Next morning he had popules all over the body. No part more thickly covered than another.

Sent away 31st Day

Note: This case differs from the other in development of abundant and of popules within the time of onset of illness.
On the 21st June Mrs. Bate 1st. From her illness suffered from severe disease complaining of pain in abdomen. No particular symptoms. Temp. 103. In popular. Next day she had severe headache that had two spells. She was extremely ill and had delirium. She was taken to the hospital. She had two more spells. None in frenzies.

Mrs. M. had severe headache. She returned to the hospital. She had many return spells. She was taken to the hospital. She was not in delirium. She was in a state of coma.

On the same day 31st. Mary Kidd 72 a full old lady was taken sudden ill and fell at night. She complained of feeling very ill. She had headache. Temp. 103 in the morning. She was taken to the hospital. She had no relief. She was taken to the hospital. She was taken to the hospital. She was not in delirium. She was not in coma.

The sudden appearance of a strong fever. The tongue was red. Feeling very much worse.

On the same day 1st. Sarah Ander 67 another one was taken sudden ill with headache. Temp. 100. The same day she developed high fever. She had a general swelling of body. Her tongue was swollen. None in frenzies. She was in a state of coma. She died on the 1st day.

She has since returned home on Queen Street. She was in almost of the herbs.
On the 4th Feb. Martha Freeman Hi from Lambany

complains of sudden fever Temp 104. Headache +

in the eyes and if he right leg at least of three

there was now small red papules in a circular

arrangement on bared mucous membrane. She was

isolated the next morning she appears a little bette

her only complaint was there were 3 small mounds

in the abdomen and one if the right forearm

faint. in the morning she developed a few mo

in the want room in two in her leg at middle.

Sent away on the 5th Feb.

She is now much better with the febrile no

and typical papules on the leg only a few

flows after the report. Although the typical

appear more clearly up to this day they

have become very uncommon.

Order dated 1st Feb. Stranath Barnet 74 as his

was complaining of being ill. No special symptom

apart from general malaise. Temp 102.

One typical papules he developed showing anit

with slight ears went more rosy and then a very

stupied reddish rash

Mr. Thadn was sent away on the 8th Feb. Mr. me in

the theme remains. He has now returned

showing that the eruption was serious but not

serious.

XXX

On the 2nd Feb. Thomas Murphy lo walking

to the tailor shot in scene accidentally by me

when I made a papular eruption on the

head - the same as Mrs. Barnet.
In the same date 5 Fany. Fredk Wlliam 69
From Deed of house in better indeed ill with headache.

From Grandson. Fever very high, mor in a chest. Man in perfect. Man much more.
Fever much. Man has a writ. Writton back.

This conclude the case which occurs in the above time. They requir to enquire within the building.

A few others have been admitted but no other case in the follows.

On the 5th Oct. Martha Freeman 27 im and is by a medecin man on a case of Caroebi. Afforestation.

She has a few time after administra two dose but he nan nothing more is seen more. The Summan Boring.

There fell ill for a day or two.

She had no traceback. Her headache. I enquire her for shat. I down about 6 a.m. She been home in bed in the airt and there in from on the leg. bone in the forehead.

Sent away from mean.

This my opinion which might have been dangerous.

Note: The case has been decided with one or two of the doctors had taken the Ulcers to last for forty.
On the 18th Feb. John Wood 63 an old man residing here in the night prison (27) appears to be drunk & in need before next morning to be punished by being sent to the nearest house in the county. I wish to know his condition but being unarmed I shew him out of the house from behind in this instance a great many poor men desert not the cold weather. He was in my mind but I feel the hot. You think wth from him again the thing had not been that

mately fails.

XXXV

On the 29th March Dr. Rolton 67 an admitted

failing & that still as for 2 days he has a fever 102.1

in the head. He has been feverish but General paralysis

not at all. The advice of the medical men is to go to

proper things, do in a room and always with

mammy wrist and hand in some state. The men

had been looked at an in a hospital with

a very small red tume which appeared in the face. The

mammy was now improved.

this van a typical case? Pronounced much

and is a typical pneumonia from the chest.

mammy membrane.
In reviewing the history of the outbreak of Small Pox in this house as set forth in the foregoing cases, my chief object is to draw attention to three facts which I found of most service in enabling me to arrive at an early diagnosis—earlier than the description usually given in Text Books leads one to expect.

In order to give a sense of completeness to my treatment of the subject I may be allowed to make some observations on the origin of the outbreak.

As the subject itself will state, that not one of the patients who contracted Small Pox had been re-vaccinated but all had been vaccinated in childhood.

It is generally recognized that Small Pox is infectious by means of a volatile contagium in every stage of the disease without exception. But that the different stages show quantitative difference in this respect: that the volatile contagium develops its infective power mostly from the pox-atum.

The two cases admitted with well marked eruption were in the house about 6 hours although a few men not protected by recent re-vaccination were in the same ward for some time no case of infection followed.

Mrs. Clark—Case No 3—was in the house 44 hours before she died. The three women who became
Infected had been exposed to infection the whole time, two of them had slept on either side for his nights while the one who seemed to have had a prolonged incubation slept some distance away from her.

The nurse who assisted to lay out the body of Mr. Temple had not been recently vaccinated although she did not contract the disease, she carried the infection to a susceptible patient in the sick ward.

The man crisp who carried the dead body of Mr. Temple to the mortuary afterwards assisted at the post mortem appears by the incubation period to have become infected from the first contact with Mr. Temple.

With the exception of Sarilla all the cases were mild. These cases prove clearly that apart from any vaccination the virus is given off that although the source of infection may be the most maligned places the infected may develop the mildest type of the disease.

Notwithstanding the fact that James Blake was immediately isolated and visited only by one man during the four days he remained in the Home 21 cases of smallpox out of 14,000 inmates followed in the following order.
Blake was here from the 11th Jan. to the 15th.

On the 25th Jan. 1 case
  • 28th 4 cases
  • 29th 6
  • 30th 3
  • 31st 3
  • 1st Feb. 2
  • 2nd 2

The only part of the house which escaped was
the lower floor where the cases were isolated.

I am of opinion that the contaminated bed clothes
were imperfectly turinized; that the source of
infection was the same in all cases because as:
other case of Smallpox followed immediately
by the cases that occurred in the house: that
the clothes stained with the blood of the steam-
pathogenic case was the channel of com-
munication. This will explain the different
date of infection till general distribution
because the clothes would be used at
different times in different parts of
the house.

I am convinced that a certain time exposure
is necessary for a person to become infected
unless especially susceptible; that it is a
quantitative difference rather than a qualitative:
A cumulative dose rather than a greater virulence of the virus.

I attribute the successful early suppression of the outbreak to the removal at the earliest stage of development of the disease.

It is not clear that Small Pox is infectious during the incubation period but certainly during the initial stage therefore the shorter the time a case is allowed to remain the less the chance of the immediate surroundings becoming infected. This because only a small quantity of the virus has been given off which does not appear to be of sufficient power to produce the disease except in very susceptible individuals.

The incubation period in these cases where the date of contact could be fixed definitely was 12 days.

The great feature of Small Pox is the constant presence of a fixed limited initial stage of peculiar characteristics even more certain than the Small Pox "anthem" (Dunneman).

In all the cases which I have enunciated the Onset was sudden. The old men and women invariably expressed themselves as not being able to make it out as they were as well as ever "yesterday" but "to-day" so ill. The mildest had sometimes a more severe initial stage than others which
Ultimately I amed the severe attack of the developed disease.
The temperature was taken at every instance a few hours after the patient made the complaint of being ill and almost invariably the leahl was 103.1 or 104 and remained so unusually for 2 days and would gradu-
ally fall in the 3rd morning even which were ob-
erved here for 3 days. The leahl was normal.
The patient had no signs of being quite well.
I have had in this house cases with very
similar symptoms including pain in the
ribs but the temperature did not run this
fever but the temperature did not run the
three day course it either was normal the
next day or continues beyond the three day
next day or continues beyond the three day
So many me inexperienced in the practice of
Small Pox these symptoms of sudden illness
rapid rise of leahl intense pain in the
ribs combined with headache perhaps
would lead them to diagnose
Influenza and indeed to my own knowledge
very many cases have been diagnosed as
such during this present epidemic. So
that while I strongly believe that ini-
test gen case of varicella however mild
there is this constant slimy initial
stage I maintain that the great
diagnostic feature is the presence of the Small Pox Eruption at a stage of the disease earlier than the Text Books usually state.

Even in epidemic times one cannot well send a case to a Small Pox Hospital on the initial symptoms of Rapid rise of Fevers, Backache, headache and weakness but if one had been taught to expect some traces of the Small Pox exanthem even at the third + fourth day certain, well within 48 hours a habit of careful inspection would have been developed & cases of Variola would be well on their way to the hospitals for this disease much earlier than is the case to day.

Taylor, Allchin, Syers, Ocker, Corlett, (1914) Zimmerman (1914) all make mention of the same general statement. viz.

That the eruption generally appears about the end of the third day.

My experience although limited is sufficient to enable me to state definitely, that the first traces of the Small Pox eruption can be found, if looked for carefully, sometime within 24 hours of the onset almost invariably within 48 hours in mild cases of Variola but that the well marked eruption may not appear till the fourth day or later.

To make my meaning clear I will refer to one of my cases.

Mr. Murphy was taken suddenly
ill during the early hours of the morning until rigor
leaves 10.4. headache: when I saw her a few hours
cold, I noticed one distinct papule on her forehead
there anywhere else. She was devastated & kept
under observation. The same evening she had one or
two faint small macules on back of hands. Next
morning there were more papules: Temp. 104
No more developed during the day:
Next morning Temp. 99.9; one or two papules
were noticed on her back - the man sent to
the small pox hospital where she developed
a copious crop of papules all over her
face the next day. I have examined
her since her return & find she has
superficial marks all over the body.

The Distribution of the rash is also not sufficient,
Clearly-stated in many of the Text Books.
These first cases are by no means constant in their
seat & selection but invariably select one or other
of all of the following parts:-
Forehead, wrist, thorax sternum., integument surface
of thumb. Anterior surface of forearm & always
d its upper or lower end; (rarely seen on the
thorax surface at this stage.) Anterior
Surface of leg: also limited to its upper
or lower end. Back: Sole of foot, Palm;
Buccal mucous membranes almost always.
The character of the rash at this early stage is not uniform. There will always be found one or two papules with unaesthetic base giving a hard, short feeling; but often there are several red ones on the small in face and forehead, which only slowly become papular, but at the same time there will generally be one typical papule in palm or sole of foot or the uninece which will if examined under a magnifying glass, show a dark cavity like centre surrounded by a light, yellowish ring, probably due to refraction of enfide that a pustule areola.

Therefore if I am called to see a patient who tells me that the onset of the attack has been sudden, that the symptoms are headache, headache, sickness with epigastric pain, I find the Temp. 102 to 104. I always make a careful search for pustules in the following order: -

Forehead & face: wrists: interior surfaces under thumb end of both forearms: palms: soles of feet: tenar in wrist of leg upper & lower ends: outer surface of thigh & upper arm: bladder mucous membrane. If I find one or two I examine them with a magnifying glass, and if I see a dark
And distinct centre with a light redness from between it to pink area I diagnosed the case as one of Small Pox. This can be done within 1 or 2 hours of the onset always. Then carriers.

During the week in which these small Pox cases occurred four cases were under observation whose initial symptoms were identical with the other cases but no eruption appeared. I submit that these were instances of Variola sine exanthema. Of course it is impossible to tell with absolute certainty as no case of eruption can be traced to them but the same thing applies to the cases in which there was no doubt as to the diagnosis.

Three other cases occurred with history of contact 12 or 13 days previous to onset of illness but only developed one or two papules after the third day and then remained in the papular stage.

One man who had been exposed in the tailor's shop to infection from the head tailor two listen ill 12 days after. Headache, backache & clearnes on eyelid 10.

On the 4th day he had one papule on the cheek & one only on the
remained papular & eventually dried up & disappeared.

Another man with an equally definite history was ill for 2 days with a temperature of 103. No papular until the 4th day when he only had three on the border of an area which had been painful with sores: these remained papular & eventually disappeared.

Another man who fomented the clothes also came some complaining of illness & showed me one papule on back of knee, one on upper arm, one on buttock: these were small at first but became large here & elsewhere. They remained papular & in time dried up.

I am strongly of opinion that there were some Casea in which the eruption appeared short at the papular stage.

In the case of Purpurea Varicella I wish again to emphasize the fact that the typical papule does not usually appear.

If I have succeeded in making it clear that an ordinary case of Varicella as seen in the majority of cases in the present epidemic in London can be diagnosed with a fair degree of certainty within 48 hours of its onset & that materially help in checking the spread of the disease by an early
central I shall feel that the outbreak in this house was a blessing in disguise.

Thomas Evans  Mrs. Ann 1894