AN INAUGURAL DISSERTATION
ON
Smallpox or Variola

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Smallpox or Variola

In relation to the early history of Variola, there is but little definitively known. The first graphic writer upon the subject was Rasis, an Arabian Physician, in the year 910.

It is an idiopathic exanthematous fever; depending upon a peculiar contagious principle, or virus, which cannot be manufactured outside of the human body. It is one of the most contagious and destructive diseases to which the human family is subject, but fortunately, it is far less frequent now, than it was before the introduction of that invaluable
Prophylactic remedy, Vaccination by the immortal Jenner, in the year 1796.

Smallpox virus may get into the top of the arm, by actual contact, of the matter of a pustule to an abraded surface, or mucous membrane; or by an effluvia emanating from a patient labouring under the disease, which being inhaled with the atmosphere, is absorbed into the circulation. The poison lies in the system, in a state of dormancy, for a certain period. This is called the latent period, or period of incubation, which lasts from nine to fourteen days. It generally shows itself about fourteen days after the reception of the poison into the system. The
Premonitory symptoms of the cephalic type are not very characteristic. The patient is generally attacked, as in other forms of fever, with a chill followed by an increase of heat in the skin, flushed face, loss of appetite, (anorexia), thirst, (deprevia) and great irritability of the stomach attended with nausea and vomiting; (which are sometimes very obstinate and difficult to relieve,) unpleasant taste in the mouth. The tongue, in some cases, is covered with a whitish fur; in others, it is but little changed from its normal appearance. The patient has pain in the head, and a very severe pain in the loins. The primary, or breeding
fever continuing two or three days, with more or less intensity. It is more frequently of the remittent character. The remissions coming on in the morning, the exacerbations in the evening. In splenitic poisoning, the fever is very apt to be of a febrile character, and is often attended with delirium, more frequently at night.

When the eruption makes its appearance, which is upon the second or third day, the fever subsides, and all the symptoms are ameliorated. The severe pain in the loins, the pain in the head, and the nausea and vomiting have disappeared. The patient feels tolerably well, and were it not for the eruption upon the
Skin, would apparently be convaliscent. The disease now speaks for itself. Incubation small red spots may now be seen making their appearance, first on the forehead, then the chin, and successively on the neck, chest, abdomen, upper and lower extremities. In one or two days, from the appearance of the eruption on the forehead, it will have extended over the entire body.

Dr. Bowling says, that the eruption comes out in circinate, or semicircular patches. He gives this as an infallible diagnostic sign of the variol. The pimples, which are at first small, soon enlarge and become very perceptible to the touch.
A little clear lymph, may now be seen at the apex of those that made their appearance first. They are now vesicles. Fluid is secreted into them, and the vesicles become depressed (umbilicated) about the fourth day of the eruption. This depressed condition of the vesicles is owing to an adhesion of the central portion of the cuticle to the true skin beneath, while the epidermis immediately surrounding this depression, is distended with the secretions from the inflamed papilla, giving the poek its characteristic appearance. (Umbilication). The skin surrounding the poek is swollen, and much inflamed, and hard to the touch.
They have rid attenda. Fluid is seen-
ted in greater abundance, and is being
transformed into pus. It now loses
its umbilication. The cuticle that
was adhered by its center is now
detached. The vesicle is changed
to a pustule, and soon becomes pro-
minent and distended with pus.

The pustule is mature from the sixth
to the eighth day of the eruption.

Those upon the trunk, and extremities,
are a day or two later in maturation.

The patient is very frequently anony-
ized in the progress of the disease, by
unpleasant sensations in the skins,
at a sense of heat and tightening.

The face and scalp, are much swollen
and done. The mucous membranes
Suffer more or less in this disease; but the eruption does not run through the same regular upon these surfaces, that it does upon the cutaneous surfaces. It shows itself in the form of little white patches, here and there, while the intermediate mucous membrane is swollen, and red. The mucous membranes more immediately connected with the outlets, as that of the mouth, fauces, tarsus, pharynx, throat &c., suffer the more. In consequence of an inflamed condition of the mucous surface of the mouth, there is great flow of saliva. (Phyalism.) From the seventh to the ninth day of the eruption, another febrile action
is set up in the system, which is sometimes preceded by a chill. This fever is symptomatic, or transient, and is in proportion to the number of pustules. When they are numerous the fever is apt to run high, and vice versa. The second-
dry fever subsides pari passu, with the desiccation of the pustules. About the middle of the second week, the pustules on the face begin to dry up, and form brownish, or Mahogany coloured scabs. During the period of desiccation, the patient is much annoyed by the itching (pruritus) which attends this stage. The comedo, and time-
faction of the face, scalp, mouth,
Throat the tubercle, as dedication goes on. The tongue assumes a more healthy appearance, the appetite is improved. The sores are formed and begin to fall off by the end of the second week, and by the end of the third, in favourable case, complete desquamation has taken place, and the patient is restored to health. The pustules upon the extremities very often dry up without forming a regular scab. Those upon the mucous membranes are instated short of scabbing. They sometime leave superficial ulcers upon the mucous surface.

What is written upon the preceding pages, is only a mere outline
of the most prominent features, and
course of an uncomplicated case of
distinct variola. There is another
variety of the disease; viz., the
confluent variety. It is called con-
fluent because the pustules are so
thick that the anola run into
each other. This variety of variola
is much more grave in its symp-
toms, than the preceding variety. It
is precisely the same disease, differ-
ing only in degree of violence; prob-
ably owing to the quantity of poison
which is absorbed into the system
or some peculiar idiosyncrasy of
constitution. Their identity is proven
by the fact, that the virus of one
will produce the other, and vice versa.
A case of the distinct variety may be converted into the confluent by the improper use of stimulating medicines. The primary fever in confluent variolin is preceded by distinct rigors; and has a more rhinogenic character than the distinct. The pain in the head and loins is very severe. The nausea and vomiting are distressing and persistent, and often attended with colic in the epigastriac region. There is disturbance of the intestinal organs. Delirium and convulsions are not uncommon in children, and the more violent cases in adults; and short all the symptoms are more aggravated. The eruption is earlier in its appearance, and is not
attended with the same subsidence of fever as the distinct.
The fever remains, but does not entirely disappear. It is not confluent in an equal degree over the whole body. The greatest confluence is upon the face, while upon the body and extremities, it is distinct, or confluent only to a limited extent. It is not so regular in its stages as the distinct variety. The eruption may be thick on some parts of the body, while upon others it is scattered (isolated). It is less prominent, and the matter is more ichorous. That is thinner in the distinct. The face and neck are very much swollen and sore. The mucous membrane of the mouth, fauces,
Throat &c. suffer greatly. These parts are sometimes so much swollen and sore, that it is with great difficulty, that the patient is enabled to swallow; or articulate distinctly; and not unfrequently in severe cases, the air passages become obliterated by the secretion of mucus, and the tumefaction of their lining membranes. The case terminates in asphyxia. The primary fever, which only retards on the appearance of the eruption, continues in this remittent form, and is apparently blended with the secondary fever, which shows itself about the ninth day. This, from the great exhaustion of the patient, may assume a low typhoid
character. There is great danger from intercurrents as pneumonia, delirium, inflammation of the brain, &c. throughout the disease; and especially is this the case in the declining stage.

Diagnosis—It is a very difficult matter to distinguish a case of variola from other forms of fever prior to the coming forth of the eruption. If there be any thing peculiar in the symptoms it is the increasing pain in the loins, and the great irritability of the stom-ach, which can not be traced to any perceivable cause. After the eruption shows itself, we will have but little trouble in diagnosing it from other forms of exanthemata.
fervor. It differs from measles and scarlatina, in being more prominent, and in running through its various stages of pimple, vesicle, and pustule. The Prof of Theory and Practice of Medicine, gives, as a pathognomonic sign of variola, the peculiar arrangement of the eruption, in crescent or semilunar patches.

The prognosis is generally favourable in distinct variola, under proper treatment; but the same can not be said of the confluent variety. It is always dangerous. When there is great lumber pain, persistence of nausea and vomiting, after the appearance of the eruption; and when the fœcal is numerous, and does
not run through a regular course
is flat, or imperfectly formed, or
filled with a bloody watery fluid,
our prognosis is unfavourable.

But on the contrary, when the lumbar
pain is slight, the nausea and vom-
ting insensible and inconsiderable, put to few
in number and isolated, ran a
regular course; and becomes filled
with laudable (not yellow cream colour)
in due time, we may project a
more favourable termination. It
is more fatal in children. Child-
rnen, in pregnant woman, in old and
debilitated persons, and in phthisic
individuals, than in those of an
opposite conditions of body.
Treatment— We have no
therapeutic means, by which we
can shorten, or arrest the progress
of smallpox. Therefore, our trea-
tment must necessarily be upon
the expectant plan. Though, if we
are sure that we have a case of
smallpox to treat, we may, to some
extent, lessen the number of public
loss by the use of cooling medicines, etc.

The patient's room should be kept
comfortably cool, and well ventilated.
His diet should be light and anti-
emetic. If the febrile action be
moderate, it will be sufficient to
move the bowels freely, with a saline
enema, as the Dulce Magnesia, or
Turp. Magnesia and infusion of tea.
After the bowels have been attended to, some refreshing drinks should be administered. From 20 to 30 grs. of the neutral mixture, (citrate of Pt assays,) dissolved in cold water, or the effervescing draught, should be given every two, four, or six hours as the nature of the case requires. But if the patient be of a phthisic habit of body, and symptoms of inflammation and congestion be present, our remedies should be more active. In such cases the abstraction of blood, from the general circulation, would be advisable, though the lancet should be used with great caution. Local depilation and counter irritants over the inflamed
Organ, as cupping, cataplasm, &c. If the brain be affected, the hair should be removed, the head elevation, and cold application made to the scalp, and irritants to the feet. If the inflammation does not succumb to the saline purgatives, depletion &c., it would be advisable to administer a mild mercurial purgative.

Ry. Proto Chloride 179, 10 gr
Pulv. Doveni, 3 "

To be followed in 6 hours by Epsom salts; (Magnesia) or the compound cathartic pill may be given with great benefit, as it acts upon the whole alimentary mucous membrane, and thereby secures both diaphoretic, and cathartic effect.
For the gastric irritability, which is such a disturbing symptom in the earlier stage of the disease, the effervescing draught with a small portion of morphia sulphate should be administered, and counter irritants applied over the stom-
ach.

Might not a small dose of boro-
spote, allay the irritability of the stomach. As I have often seen it do in exceptional nau-
sea, and vomiting in measles.

"After the eruption is out little treatment will be required." The bow-
els should be kept in a double state. All unpleasant symptoms should be palliated, and the patient
Keep as comfortable as possible, throughout the disease.

When the secondary fever comes on, the antiphlogistic remedies should be resumed, and administered according to the degree of excitement.

Particular attention should be paid to intercurrent inflammations which are so apt to supervene in the latter stage of Variola, and should they occur, will have to be combated principally by local remedies, as cupping, fomentation &c. Give anodynes to allay irritation; and if deemed advisable the anodyne may be combined with calomel or blue mass, which may be carried to slight styalism.
If the patient becomes much exhausted in the latter stage of the disease, the system must be supported by a nutritious diet, stimulants, tonics, &c.

Any nervous symptoms, as pain, jaundice, &c. should be allayed by an opiate at night if there be no determination of blood to the brain.

J. W. McLell

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