

AN
INAUGURAL DISSERTATION

ON

Asthma

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BY

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Respectfully Dedicated to the
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Asthma

This affection is familiar to almost every individual, and is generally known by the name of asthma, though in some sections of the country it is called Pthysic. The term is usually applied to an oppressed respiration or dyspnoea, occurring in irregular paroxysms.

The disease resembles, in this respect, the bronchial irritation, which results from a sudden cold, or from any other cause capable of setting up an irritation in the bronchial mucous membrane accompanied by a spasm, or a very similar symptom may result from bronchial congestion.

In fact the essential characteristic of asthma is very well exhibited in such an attack, to which, no doubt, asthmatic patients, if closely interrogated, would refer. The

first appearances of the peculiar symptoms
of this affection. I believe it is a
conceded point that the pulmonary air
tubes are largely supplied throughout
their whole extent with nerves and
muscular fibres, which contribute an
important part to the functions of
respiration. It is not fully determined,
I believe, to what extent this peculiar
organization of the bronchial mucus
membrane, influences the respiratory
action. But I believe agreed that
a morbid sensibility of this structure
produces affections of the organ of
respiration characterised by peculiar
nervous symptoms and often accompanied
with unmistakable evidences of spasmodic
action, such is the character of one

modification of Croup. of Whooping Cough
and also of the disease under Consideration.
That this is especially true of the latter
appears from the fact that symptoms of
inflammatory action are seldom developed
to an extent sufficient to account for the
existing obstruction, and also from the fact
that the difficulty often comes on so
suddenly as to preclude the development
of inflammatory action and even of
Congestion, and it is not readily explained
in any other way than by supposing
a Spasmodic action in the mucous membrane
of the bronchial tubes, There can be no
doubt however that most cases of bronchial
inflammation and Congestion are accompanied
by more or less Spasmodic action in the
Muscular fibres of the mucous surface

But these affections are generally more gradual in their approach and consequently the attendant spasmodic action is less marked and severe. While the general Constitutional symptoms are sufficiently diagnostic; It is, therefore, only those cases of Spasm of the bronchial tubes in which few if any Constitutional symptoms are present and inflammatory or congestive action especially, is absent that should be designated as asthmatic. We cannot however exclude in this explanation a grade of local irritation, which may in severe and persistent cases develop a true state of inflammatory action thus changing the character of the disease. I have little doubt that cases do frequently occur of purely a nervous character. in which even

The associated irritation usual to asthmatic
affections is wanting. Thus those cases
occurring in temperaments of a highly nervous
character produce suddenly, without a
moment's premonition by a peculiar odor,
The smell of *fecæ caninae* ⁱⁿ close rooms
where there is not a proper ventilation of
air, irritation of the stomach, sudden mental
emotions, and other influences operating
powerfully on the nervous system, are of
this character, and it can scarcely be
doubted. If the true conditions were
determined they would present few or no
evidences of irritation.

The characteristic symptoms of a paroxysm
of asthma are however, frequently
preceded for some days by evidences
sufficiently distinct to indicate to the

asthmatic subject the approach of an
attack, though in other cases the
paroxysm is either so insidious or sudden
as to take him unawares, coming on
frequently in the night, and as suddenly
as an attack of Spasmodic Croup.
The individual starts up from his
sleep with a sense of Constriction
in the lungs, amounting to a feeling
of Suffocation, and rushes to a
window for fresh air as for life
Nor does this entirely relieve the difficulty
as an oppressed and wheezing effort at
Respiration, often heard at a considerable
distance, continues for hours, accompanied
by a sensible Contraction of the chest,
and a remarkable hollow in the
epigastrium produced by the elevation of the
diaphragm.

In this condition, it is no unusual occurrence for individuals to sit all night at an open window or, if that is too cold, in a room fully ventilated by having doors and windows wide open, and without the least complaint of chilliness or subsequent inconveniences to health, while those around will perhaps suffer intensely from the cold, and incur great danger of inflammatory attacks, The appearance of the patient are often most distressing. The countenance being purple and haggard, and the surface drenched with a cold perspiration while the capillary circulation in the extremities and over the body, and the severe and laboured effort of the organs of respiration, clearly point to an

insufficient supply of atmosphere
air. to answer the demand of the system,
The effort to catch is imperfect from
the interruption of the act of inhalation.
While the effort to talk is little more
successful, The pulse is generally
irregular small and frequent, with
occasional attacks of palpitation of the
heart, sometimes however the pulse is
full and ~~regular~~, or slower than
natural. The urine is generally quite
pale and copious but, as the disease
declines diminishes in quantity becomes
high colored, and upon cooling
deposits a sediment. The tongue will
mostly be found coated, and the bowels
costive, though it is not unusual for a
diarrhoea to set in, as the spasm subsides.

The respiration becomes more full and
lab appressed, and a glairy mucus
expectoration takes place giving to the disease
the character of humid asthma,)
While in other instances the spasm declines
without Expectoration, in such case it is
by some called the dry asthma,)
These constitute the most leading symptoms
of a paroxysm of asthma. The return
however of the paroxysms, varies greatly
in different cases. In some occurring not
often than once a year, or longer.
While in others they return upon every
sensible change in the state of the weather
They assume a distinct periodical character
and return regularly every two, four,
six, or eight weeks, and some times
recur often and increase in violence till

more or less difficulty of respiration exists
all the time, as these attacks subside.
patients complain of great exhaustion,
with some feelings of constriction in the
lungs, and soreness of the muscles upon
any exertion. Symptoms of indigestion
frequently precede a paroxysm and
not unfrequently follow its decline
a sense of fullness and weight in the
epigastrium is often complained of after
eating, and is followed by gaseous
eructations. A peculiarity often attendant
upon the disease is a tendency to distinct
periodical recurrences every night.
Subsiding mainly thro' the day. for
a week or longer, which clearly fixes the
neuralgic character of the attack.
I shall now pass to a few physical signs

and then to some of the leading Causes of the disease, The true Condition of the lungs in asthma is very ^{well} shown by a physical examination. Percussion in the uncomplicated Cases will generally be found nearly as resonant over the entire chest as in health, While the usual sound afforded by auscultation will be greatly obscured, even during the most violent effort at respiration. Only a faint and indistinct respiratory murmur, with here and there a whistling or sibilant sound, will be heard: but as the spasm subsides, and air is more freely admitted into the lungs, a more natural respiratory murmur will be recognised, and if mucus secretion takes place, more or less of the moist rales will be heard. These sounds, however, appear to change as the spasm

of Bronchial vessels is more or less severe.
The cases which have come under my
personal observation have generally
presented and increased expiratory sounds,
often exhibiting the distinct whizzing sound
which is heard on inspiration as the disease
subsides; . Causes.

I believe it is conceded by the profession
that there may be an acquired or
hereditary predisposition to asthmatic
affections. But what peculiarity of
Constitution or physical organization
is necessary to the susceptibility thus
admitted generally. It must be
acknowledged it is not explained or fully
understood. The most that can be
said with any reasonable show of
truth is that persons with narrow or

Contracted chests, and with great nervous susceptibility of the lungs, are more liable to attacks of the kind than others differently formed and constituted.

These facts seem to be pretty well determined. Thus the form of the chest referred to is almost always associated with the disease, and more especially in hereditary cases. Moreover persons affected with asthma are also very liable to nervous affections, such as Rheumatism, Gout, and Neuralgic diseases. Some cases of the disease will be found, in which more or less tenderness in the roots of the spinal nerves will not be detected by careful examination. It is said that excess in sexual indulgence predisposes to an attack of the disease also intense mental affections or strong

-passions, protracted, and severe illness -
While among the exciting causes, those
connected with derangement of the
Stomach are the most common so
intimate is the connection between the
condition of the stomach and
paroxysm of this disease that there
are but few of the purely uncomplicated
cases which will not escape the
periodical recurrences. to which ~~with~~
~~such~~ cases are particularly liable -
by strict care and attention in diet
and drinks, ~~and other~~ Another very
common exciting cause is atmospheric
change. It occurs more frequently
in the more northern and colder regions -
yet it is very common during the warm -
damp and changeable seasons

- in other regions it is often produced when a predisposition exists by a sudden exposure when the system is relaxed by perspiration, or by exposure after taking a warm bath. It has also been excited by sudden and unexpected intelligence. Some persons who are subject to this disease cannot endure the odor of pipeac and some particular plants, or smoke of Tobacco.

There seems to be a peculiar mustiness in hay when stired that is very liable to excite an attack of asthma in those predisposed to it, It is said also to be produced by the suppression of habitual discharges and the sudden reception of cutaneous eruptions from the continuous sympathy existing between

The skin and mucous membranes,
It is said that this affection cannot
be said to be peculiar to any period
of life as cases have been observed
in the young and old, as well as
the middle age. I believe most
frequently in the latter. When
occurring in children they rarely
fail to out grow it. Instances of
the like have occurred in my own
experience. Nor is it peculiar ~~to~~
either sex, but from more frequent
exposure to its exciting cause and
predisposing cause it is most frequently
met with in males.

Prognosis

Uncomplicated ^{the} asthmatic affections in
healthy constitutions should I think

unquestionably be cured, while those cases connected with more serious disease of the lungs, Heart, or other important organs, can scarcely present any reasonable prospect of much permanent relief, in ordinary cases, however, while the symptoms recur and subside again. There is a fair chance for beneficial effects from a judicious course of Medication, even if they cannot be entirely cured as before remarked cases occurring in children, which are quite common, may be considered susceptible of ultimate and perfect cure, while aged persons, especially with somewhat

Broken Constitutions can only expect to be relieved and the attack depend in frequency by an appropriate course of Treatment and dieties. Our prognosis may therefore be said to depend upon the circumstances of each case

Treatment; In the treatment of asthma, there is two prominent indications to fulfill; one to relax the spasm, and the other to correct the predisposing Cause; The former is presented in the paroxysm the latter in the interval

The symptoms of asthmatic paroxysms so strongly suggest that of Congestion and inflammation of the lungs, that Blood-letting is apt to suggest itself to the mind as a Remedy.

Should the disease be associated with bronchitis and a strong excited pulse. This remedy may be employed with propriety, but when a contrary state exists, where there is Congestion and a feeble pulse, This remedy should be avoided as an injurious remedy, one of the most effectual remedies in producing relaxation, is the use of emetic substances, and these may be given. So as to vomit or nauseate to a considerable degree, Ipecac is much employed as emetics or nauseants.

Lobelia Too; has great reputation and in some instances very effectual as such it has proven to be in my hands,

Partor emetic and Squill enjoys its share of reputation as a remedial with many; Chalcicum is recommended by some. ~~But~~

as being applicable in gouty Cases.
Antispasmodics. are often useful
in purely Spasmodic Cases - among
which are Sulphuric Ether. assafoetida.
and musk. are among. The most
effectual. and they are often useful
associated with one of The Salts of Morphia.
and more especially adapted to
hysterical Cases; Strong Coffee is
employd. and often serviceable, in
doses of a Cupfull taken every twenty
or thirty minutes

Certain narcotics are beneficially
employd. when asthma is not complicated
with Hypertrophy of the heart. or a
Tendency to Cerebral Congestion, to
counteract its use. by making the
brain the Center of Irritation. and

-Consequently an affluer of blood.

Stramonium enjoys a high reputation as a Remedy. and is employed almost exclusively. by Smoking the dried leaves or stems - with Tobacco. The relief obtained from its use is great. but should be abandoned, so soon as it produces vertigo or nausea.

Chloroform is said to be a good Remedy by inhalation but care should be used. in its use. as it produces very depressing effects.

Besides the three classes of Medicine mentioned many other remedies. have been used with more or less success.

The application of electricity or electro-galvanism has occasionally arrested it. The same may be said of Cold Water dashed over the shoulders.

in the quantity of a pail full,
The simultaneous use of cold drinks
and pediluvia have been recommended.
rubefacients to the chest some times
afford relief. In Cases attended
with spinal tenderness. cups or leeches
should be applied over the tender
vertebra and followed by blisters
or tartar emetic ointment. The apartment
should be well ventilated. all articles
calculated to ~~obscure~~ restrain the
movements of the chest. should
be removed. In the interval our
efforts, should be to remove the morbid
tendency. attention should be
directed particularly to the state of
the stomach and bowels.
Dyspeptic symptoms require the use

of Antacids, Carminatives. and
Tonics. Constipation. Laxatives.
deranged hepatic secretion. The
mercurial alteratives, In the female
the menstrual function should be
kept in order.

Anemia and general debility must
be counteracted by Tonics and
suitable regimen. The diet should be
easy of digestion. and nutritious.

Yet not stimulating. Much Caution
should be observed not to overload the
Stomach. alcoholic drinks. as well
as the habitual use of Coffee and Tea
should be forbidden. Exercise is highly
useful especially on horse back.
mild and equable climate. Neither
very moist nor very dry are the most
favourable

Traveling sometimes are advantageous
a change of scenery so that a
new set of impressions may be
made on the nervous system a
long voyage sometimes will offer
some hope of permanent cure
should there be no organic disease
existing.

Geo. H. Knott