Adenoid Vegetations

being a

Thesis

presented for the degree of Doctor of Medicine of the University of Edinburgh, 1889.

by

[Signature]

[Name]
Achaloid Vegetations

The malady selected as the subject of this Thesis, so in what has been described as Achaloid Vegetations or Post Nasal Growths—a disease to which a good deal of attention has been paid of late, and which I have had considerable opportunities of studying at the Throat Hospital, St. Mary Square, London, and the Throat Cliniques at Vienna.

This thirst condition consists of a Hypertrophy of the Achaloid Tissue situated in the roof of the Pharynx, a part designated the Pharyngeal Tonsil or Tonsil of Throat.

The disease has only recently been described or received that attention which it merits, influence as it does the development of youth.

In the year 1859 Agermack of Pesth seems to have been the first who directed any attention to the Nasopharynx as seen with the Rhinoscope. In a paper by him 1 four cases of Nasopharyngeal disease are described: the last of which reads very like a case of Achaloid Vegetations. This paper was followed by the publication of articles by Smelcer,2 Studer, Voltolini, and Wagner, but the first named with

1 Wiener Medizin Wochenschrift August 6th 1859.
2 Siedelhans Society Vol XI Selected Monographs.
He especially developed the art of Rhinocopy.

Understanding these writings, it remained to Wilhelm Meyer of Copenhagen to publish the first complete account of this disease. His paper was read before the Medical Chirurgical Society of London in 1869 and published in Volume LIII of their Transactions. Since this paper was written, a great deal has been added to our knowledge of the subject, and it has formed the basis of all subsequent investigations of the disease.

In Paris recent attention has been directed to the Moria condition by Lowrey and Chatelain. The last-named author’s book “Les Miasma en adéocide du Pharynx” being very interesting and elaborate.

Considerable notice has been taken of this disease in Germany for some time past, notably by Professor Haeckel of Berlin.

There have been very few publications on the subject in this country. Profess MacKenzie seems to be the first to describe the disease in his book on “The Diseases of the Nose & Throat.” Shortly he has also directed attention to the subject. Bullin, Leinen Beaver and workers have also investigated the condition.

1. Hospitals Tidende November 14th 11th 1867
   Archiv für Ohrenheilkunde 1873.
2. Deutches Medicinische Wochenchrift Nr 41 1884.
3. Lancet October 2nd 1886.
As regards the reason of the non-recognition of the disease in this country till a comparatively recent date, I think it must be due to the profession not having had the means at the time—certain the means for acquiring the skill necessary for examining the Naso-throat. How many Medical Students or Medical Practitioners are there, who are familiar with the feel, or the appearance of the Naso-throat, as obtained with the finger or the Rhinoscopic Mirror? Another reason may be brought forward—I think, namely that the symptoms were thought to be due to Enlarged Tonsils—a condition which often accompanies Adenoid Veptation—and treated accordingly. Thus if the patient did not improve, Sycophanta was considered the cause of the mischief.

Since the introduction of the Rhinoscope some excuse must be made for its non-recognition, owing to the difficulty of examining the patient, who are generally children.

The importance of recognizing the disease early cannot be too strongly urged on the Profession, owing to its prejudicial effect on the voice, development, and in many cases, the hearing.
palsy of the child. Its importance as regards voice can be estimated, when one remembers the function of the larynx as a resonating organ of speech. By the impediment of the respiration which the disease occasioned, the Throat is badly developed and the child becomes pale and anemic; but perhaps the chiefness which is present in so many cases is its most important effect.

Aetiology. So far I have been unable to discern any distinct cause in this condition.

It affects all classes of the community, as hyperic conditions do not seem to have any direct relation to its development.

Meyer thought a hot climate especially favoured the disease. In my experience it is just as common in a hot climate as a cold one, judging from the frequency of the disease in London and Vienna. It has not been my good fortune to observe a case in a cold, cold, or damp climate.

Dr. Scanes Spicer's observations on the aetiology are worthy of notice. He thinks the condition is due to cold setting up a Chronic Rhinitis, from Lancet October 27, 1888.
which the acid and perverted reactions pass over the Pharyngeal Tissue and cause its Hypertrophy. He thinks dust, pollen and other finely divided matter will have the same effect. The germs of Measles, Scarlet Fever, and Small Pox act in a similar manner. In young children, he thinks the absorption of domestic dust agitated matters will cause the disease. He is of opinion "that this state of Chronic Inflammation and debility of the tissues of the upper Respiratory Tract is not always separable from Struma and is often associated with Anemia debility and Lymphatic gland affection of the neck........... leading to depressed vitality of the tissues of the rest of the Respiratory Tract and facilitating the superscription of Bronchitis & Phlegmon and preparing the soil for the reception of the Tubercle Bacillus."

The disease has not been studied long enough to draw any conclusions as regards its Hereditary transmission. Chatellier 0 says on page 15 that children of consumptive marriages are often affected. On page 16 he says he knows a family in which one of the parents was affected with Adenoid Vegetation and that some of the children have the

0 Chatellier "Le Tumeur Adenoides" Paris 1886.
Scurvy disease, with open mouth, pinched face, short
upper lip which is thickened, and protruding and
prominent incisor teeth. On page 17 he says that
patients who have suffered from Follicular Tonsillitis,
transmit Allurid Vegetations to their children.
Sex appears to have no decided effect. In
Victoria, 17 of my cases were males and 9 females.
Dr. J. von Bergsztényi assistant to Professor
Schmitzler's clinique at Vienna informs me,
that the disease is common among the Jews.

Symptoms. In most cases I have found the
patients' friends complain that the child suffers
a great deal, so that sleep is much disturbed by
dreams and nightmares.

The patient is usually a child between the
ages of 7-14, pale in face with a stupid expression
due to the mouth being constantly open. The alveoli
have lost their teeth. The lips, the upper especially,
are thick, and dry owing to the air passing over them.
The tongue is dry for the same reason.

Chatellieu says that the air sinuses of the
head as the Frontal, Sphenoidal, Sphenoidal and
the Autum of Highmore cease to develop, as the
Air does not circulate freely through the nose. Hence the dimensions of the nose are altered.

In looking into the mouth, the palate is found to be highly arched and so the transverse diameter of the mouth is decreased. I have seen it stated that the disease accompanies Cleft Palate, but have been unable to verify it. The Tonsils are large in many cases. Granula Pharyngitis is showed in some cases. Very often then I saw a greenish yellow discharge running down the posterior wall of the Pharynx.

The voice is muffled, just as if the child had an acute Cough. The letter P.B.M.R. are very imperfectly pronounced; for instance Common becomes Cottod; don't toss Dickens has a very good illustration of this mode of speaking in "Oliver Twist," when he makes Barrymore say of Fagin's gang say "Steadfast is the next root" and "Ah! as I told you, from the cutting, but nothing in your way, or I'd be hanged." He seems to strike it characteristic of race.

Fluctuations & has Arivid Stuttering and Hemia present in people with Adenoids.

The Breathing is bad cause it Whistle comes in by the mouth. When a patient is told to close his mouth and breathe through the nose, a very imperfect

Dr. Franz Möbius "Monatschrift für Ohrenheilkunde" Jan-Feb 1887

Jan-Feb 1880.
Arent of air is felt. Chatellee on page 27 mentions the case of a gentleman undergoing his military training, who could not perform his gymnastic exercises owing to the difficulty of breathing through the nose. He also states that children are often seized with paroxysms of distress in breathing, which alarm the parents.

The thorax is not well developed; the sides are flattened and compressed, and expansion is not good. These changes are due to the imperfect air supply which reaches the lungs.

Staphy is in some degree present in most cases. This must be due to air being unable to pass up the Eustachian tubes to the middle ear in sufficient quantity, or to a catarrhal inflammation spreading up the tubes to the middle ear causing an otitic chronicum. Aswell Bates 0 states that it is due to the dilatation muscles of the Eustachian tubes not acting properly.

Tinnitus Aurum is stated by Meyer to be very often present.

The taste and smell functions do not seem to be affected.

The intellectual functions also do not appear to me remarkably affected. Prof Ficrueik 9 of Berlin 1 British Medical Journal Sept 15 1888
2 Dtschhen Medicinische Wochenelcht Nos 41 1884.
says that the impairment of intellect and want of energy manifested by these children is real, and not merely in the expression of their countenances, and it is made evident when watching these children after the growths have been removed. To the gratification and astonishment of the parents and teachers, the children hit into vigor, and all of comprehension now make rapid progress, and their comrades soon cease to make a laughing-stock of them. It seems as if, through the removal of the obtruding vegetations in the naso-pharynx they had become different beings."

Sometimes the patients complain of pain at the posterior part of the head and a feeling of weight in the head. Franklin says: "The children come home from school complaining of pain in the head, and desire to lie down and occasionally vomit. On the next day they have sufficiently recovered to go to school again. Slight fever sometimes accompanies these attacks. In many cases the parents and physicians content themselves with a diagnosis of migraine or Explanation of these oft-recurring attacks. The children pass their holidays in the country, or at some health resort where they are comparatively free from such attacks yet they return home bringing their old trouble with
Then it is said "the children cannot bear the air of the schoolroom. Finally, the adenoids paralyze the lungs and the child entirely lacks health." In my limited experience I have not met with such an advanced state of affairs; but certainly the patients seemed to be rather deficient in mental powers as evidenced by their not comprehending what was said to them.

Local Examination. Important as the symptoms are in giving me a clue to the nature of the disease, I think there is nothing so important for establishing a correct diagnosis, as the physical examination of the adenoids themselves. Under the most advantageous circumstances it is far from an easy matter to obtain a good view of the posterior nasal aperture with the rhinoscope, and in patients suspected of having adenoids, those for the most part young, it is especially difficult. The other method of examination is with the forefinger pressed into the nasopharynx. This is rather a disagreeable operation but it has this advantage, that it can be done when it is not possible to use a mirror.

In order to palpate the nasopharynx it is necessary...
that the patient should sit down, or at any rate that
that the patient's mouth should be on a level convenient
for the examiner to introduce his finger. If the patient
be a child the hands and feet had better be held by an
assistant. It is a good plan not to warn the patient
what you are going to do. The surgeon should stand on
the right side of the patient, and directing him to widely
open his mouth, pass his forefinger gently into the mouth
and behind the Soft Palate into the Nasopharynx. It is
not necessary to use a gag, but a towel wrapped round the
left forefinger and placed between the teeth on the left side
is a good plan to prevent the patient biting. This method
of examination should not be practiced until after
Posteris Rhinoscopy, as it makes the Pharynx and parts
in that neighborhood hypersensitive and difficult
to inspect.

To examine the Nasopharynx with the Rhinoscope
a small Laryngeal Speculum (2 inches) should be used.
It is a rare matter of practice so I will content myself
with giving just these hints: to depress the tongue well;
to direct the patient to breathe through the nose, and to
have his head bent a little forward. In cases where the
Palate will not remain quiet it is a good plan to
make the patient sound "on" through the nose. Hooks
for drawing down the palate are of no use, tending to the discomfort to the patient.

Results of Examination. In a well marked case one feels with the finger a soft elastic mass, springing from the roof of the Nasopharynx, and hanging down into that cavity. The mass is lobulated like a bunch of grapes and the lobules feel about the size of peas. In other cases the mucous membrane seems elevated into rounded nodules. I have not found the chasm well marked in the region of the Eustachian Tubes. After withdrawal the finger is usually tinged with blood as the growths bleed very easily. The mass is very soft, and parts may be easily detached by the finger.

On examining with the Rhinoscope in a marked case, one is first struck by the difficulty in seeing the openings of the Posterior Nasal Fissures satisfactorily, especially towards the upper parts. Instead of the Septum and Turbinates one sees a mass of yellowish, matted crust, which, perhaps, may be covered with some blood. When the crust has been removed by means of a spray of Carbolic acid, a pustulous mass like a bunch of grapes is seen hanging from the roof of the Nasopharynx. The lobules are rounded, puffy.
Horizontal section through an Abnormal Vegetation

A lymphatic follicle
A mass is yellowish in content, but there is always a difference between it and the surrounding mucous membrane. The broad base of the lesion is to the roof and upper part of the sides of the Nasopharynx. I have not observed them sprouting from the Tapes, Septum haemorrhage or from the upper surface of the Soft Palate. In many cases the Tumours are large and often there is Granular Pharyngitis.

The mucous membrane of the Anterior Nasal Apex is generally Hyperaesthetic.

Morbid Anatomy. From the examination of specimens of the tumours removed and cut into sections by myself, I am of opinion that the aurum tumours are a mere Hyperaesthesia of the acute tonsil normally situated in the Nasopharynx. The tubulation is an exaggeration of the folds of the mucous membrane which exists in that region.

The photographs on the opposite page are taken by Mr. Andrew Price from my own specimens. The tumours have a surface of Columnar epithelium, sometimes ciliated epithelium. Beneath this
Vertical section through an Adenoid Vegetation.
Relief of tissue with many lymphoid cells. These are many lymph follicles and blood vessels. Irregular glands are sometimes seen.

**Diagnosis.** From the symptoms one can gather a good idea as to what is the trouble from which the patient suffers. But there are a few diseases whose symptoms are not unlike Adenoid Sinusitis which must be closely considered.

**Enlarged Tonsils:** This condition is very common in young children and gives rise to symptoms very similar to Adenoids. But if the removal of the Tonsils does not alleviate the symptoms, Adenoids are probably present and should be sought for.

**Nasal Polyps:** Causes difficulty in breathing through the nose, but is rare in children.

**Chronic Rhinitis:** Causes symptoms not unlike Adenoids, but such advanced cases are rare in children.

**Enlarged Bursa Pharyngis:** This bursa is a remnant of fetal life situated at the back of the Nose Pharynx which becomes distended with mucous and swells up to form a roundish mass in that cavity.
A lead of mucus is often found at the apex of the meatus on the写出. The chief symptom is difficulty of breathing through the nose.

Relation to Granular Pharyngitis. In Vienna I saw a lad who had large flat granules in the posterior wall of his pharynx. On examination with the Rhinoscope, these were found to extend upwards to the roof of the naso-pharynx, where they had the appearance of the small nodules formerly described. This case showed how intimately these diseases are related. Chatelhei (in page 17 mentions that some children have Adenoids, while others in the same family have Granular Pharyngitis.

Statistics. The disease is met with mostly in children and I think it is more common than is supposed. Meyer examined 2000 school children at Copenhagen and found that 20, or 1 per cent showed distinct symptoms of the disease. He also examined 700 children at the Orphanage Haverstock Hill and found that 13 or nearly 2 per cent had Adenoids further. Professor Sayen saw 4000 children at Leyden and found that 5 per cent showed symptoms of the growth.

The disease has a very important relationship to diseases of the middle ear. They examined 1083 cases of deafness and found 80 cases of Adenoid Vegetations or 7.5 percent. Of 175 cases who had Adenoids 130 or 70 percent were affected with middle ear disease.

William found that of the 712 cases who were attending the ear clinic of Dr. Hartman in the half year 1886, there were 135 cases of Adenoid Vegetations, nearly 20 percent. Of 242 children under 15 who had disease of the middle ear 90 or 40 percent had Adenoid Vegetations.

Schwingeal reports that of 119 cases of Adenoid Vegetations 100 or 84 percent had disease of the middle ear.

Blomeir (1) has collected from private cases and cases at the Bradford Eye & Ear Hospital 198 cases of middle ear disease under 15 years old, and found that 101 or over 50 percent had Adenoid Vegetations. These were removed in 90 cases, thus clearing up all doubt as to diagnosis. Of 152 cases of Adenoid Vegetations 125 or about 85 percent showed symptoms of past or present affections of the Middle Ear.

In the month of October 1888 321 cases came to Professor Schmitteker's Trossen Clinique at the (1) British Medical Journal July 14 1888 page 73
Allegamenee Poliklinik Victoria. Of these 17 suffered from Adenoid spinitis of varying degrees. Below will be found a short resume of each case showing the principal symptoms.


Girl 16. Difficult breathing. Large mass of portion divided into two.


Girl 19. Goitre; boil well marked shingles. Turbinate hypertrophied.

Girl 18. General hypertrophy of mucous membranes.


The next case that must quote is that of a Faji (Hebrew) aged 24 who has a fine healthy looking man but a disquieting mouth breathing. He had a large mass of portion but did not speak the characteristic. He could barely breathe through his nose with his
mouth claud. After operation he at once improved. His voice, however, a breathing constantly became quite normal.

I have seen three cases of Subabement of the Bassa Pharynx.

Prognosis. The improvement which takes place in the patient’s condition after operation is very marked, and apparent very soon. In my experience no bad results follow radical treatment.

The disease should be removed as early as possible in the child’s life, as it has a very deleterious mental effect on the development and away to the brain’s vitality the patient might become a suitable victim for the Tubercle Bacillus to flourish in.

Tuberculosis in any chronic disease is a sure to affect the throat would have a much more doubtful prognosis if the Naso Pharynx was affected with Adenoid Vegetations.

I think the greatest lead is to atrophy as the patient grows up but this should not preclude an operation as the effects of the disease are lasting.
Treatment. It must be apparent that the disease requires some radical form of treatment, owing to the deleterious effect it exerts on the child's health and the organ of hearing.

It may be urged against operation, that as the child grows older its troubles will cease; this is quite possible as lymphoid tumors which in hypertrophied cases tend to atrophy as the child increases in age; but on the other hand the effects of the disease begin and continue while the growth and development of the child are most active and the results of this malnutrition remain all its lifetime.

As regards the administration of an anesthetic, it does not appear to me to be absolutely necessary except in the case of a young and nervous patient. If an anesthetic must be used Chloroform is the best, as it does not act on the sensibility of the pharynx and larynx parts so much as others. In Coccine we have an excellent local anesthetic, with this great advantage, that the patient is in the sitting posture and perfectly sensible. I have practised 8 times using a 20 percent solution of coccine, and found it acted admirably.
Ether I have also used but I do not think it is so good as Chloroform. The danger of Ether and
Chloroform is in the blood passing down into the lungs. F. Franklin H. Hooper 0 used Ether,
and has the patient seated in a chair, a proceeding fraught with much danger. The
only disadvantage of Cocaine is that sometimes the
Operation has to be repeated.

The Hemorrhage is not very heavy and soon
ceases when the patient gagges a little antiseptic solution.

There are many methods of treating this
affection, all of which I shall mention, only fully
describing the method I have practised and found best.

Then is no doubt, that the only mode of
thoroughly saturating the chorion is by means of
cutting forceps. There are many kinds of forceps
all modifications of Downsbys, but in my
own part I prefer those of Schultz made by
Marcini of Vilna, as shown in Photograph 0.

They open and close perfectly.

The method of operating is as follows. The
chorion
must be burned 3 or 4 times with a 20 percent
solution of Cocaine allowing about 15 minutes for it
to act. The patient must be naked, if possible

"Adenoid Vegetations in Children" Read before the
Boston Society for Medical Observation page 8
1868.
necessary, the hands and feet help. The head should be steadied. A pad is necessary sometimes in young patients. A good light should be thrown into the pharynx and the forceps introduced close into the nasopharynx. The utmost gentleness must be used in getting them round the soft palate. It is best necessary to use the forceps as a guide, as one soon learns the feel of the nasopharynx; the forceps is of use as a tongue depressor. The cutting ends of the forceps having reached the nasopharynx, they should be pressed up to the roof still closed and pressed firmly against the mass; then they should be opened, still pressed upwards, and closed firmly, without removing the forceps, this cutting operation should be repeated two or three times and then the sides should be attacked in the same way. A slight twisting action is advisable, but it should not be too rough. Care must be taken not to injure the Eustachian tubes. After removing the forceps, the cavity should be explored with the forceps to feel if any growths remain. If any disease remains I use Hartmann's Reitz knife (fig. 1 in photograph) in removing it. It is pressed firmly against the roof of the nasopharynx and drawn
from side to side.

When all the protuses have been removed the patient should be directed to joggle them. Boring down, and it is a good plan to inject some of the fluid through the nostrils. Considerable pain and nothing of the part remains for some days after the operation, but I know of no other inconvenience.

If Chloropine is used the patient must have his hands with the head low, in fact from the edge of the table as then the fluid will tend to pass down the nostril.

Then are many other means of operating, some operators seeming to have their own method. Mayer uses a Reijz knife introduced into the nose through the nostrils, the fore finger being used through the mouth as a guide. Carl Michel and Vohrini use the Salvarsan cautery through the nose.

Gryg of Amsterdam uses the nail of the forefinger. To do this thoroughly the nail must be very strong.

Ski William Balby recommends an artificial finger nail made of metal. It has

1) Lancet, October 2nd 1886
This advantage that it leaves the pulp of the
fruits far from palpation.

Gottstein of Breslau uses a Raju
knife, which is drawn anteriorly instead
of laterally as Hartman's is.

Helslande of Brunslo has an addition.

I have seen this in Professor Politzer's clinic
earlier, and consider it too complicated
for practice.

The application of Strong Carotics
with Cherini Acid and nitric acid are
defective.

In one case where the patient was male
I tried a cold wave introduced through the mouth
under the guidance of a mirror, but found
it did not answer.

I have in this paper endeavored to give
as clear and concise a summary as possible of
the history and literature of Adenoid Vegetation,
including a description of many cases which
have come under my own observation in
the various clinics. While I have had an
opportunity of attending,

The conclusion at all events may be
Arrived at from the consideration of this malady, that although apparently so trivial in its nature, yet its effects are great in proportion when we think of its dire results in hampering growth and development.

Its diagnosis is attended with certain difficulties, but when its removal by operation is followed by such rapid and permanent improvement, the fact alone amply amends whatever energy and facility of manipulation have been devoted to its study.

I hereby certify that this Theme is my own composition and writing.

Bazanze. Feb 19, 1889. [Signature: J.R. Montgomery]