"Hemiplegia -
The History of Two Clinical Cases:
One Right-sided and resulting in Abscess -
With Remarks."

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Here it necessary to give reason for selecting chronicosis as a subject for a thesis it would be sufficient to state that there exists a great amount of literature on this very uncommon and highly interesting affection, for although in books devoted entirely to affections & diseases of the tongue some fairly good and extensive accounts are given yet in some of our most exhaustive and most widely read surgical works the affection is not even named. Thus, in such classical works as 'W. Dickson's Surgery', 'W. Heath's Dictionary of Practical Surgery', 'W. Spencer's Surgery', 'W. Keetley's Surgery', 'St. Lavin's Dictionary of Practical Medicine', and other works which might he mentioned, no account of this affection is to be found. Again, 'W. Butlin's (Sciences of the Tongue, Cassells & Co.) & R. Dyce, Beverley (in Liverpool Med. Chir. Journal July 1883) give the two best and most exhaustive accounts of this affection which I have been able to obtain and consider. Again in the issue of 'St. George's Clin. Medicine by the New York Medical Society, Vol II page 274,'
A very interesting case of this Affection is given but as I have incorporated the Clinical History of this Case in this Thesis no further particulars need to be mentioned here.

Seeing then, that so few Clinical Cases of Hemi-glossitis have been fully recorded I have selected this affection as forming a subject pre-eminentely worthy of consideration for a Thesis and that the more so as I can record Two Clinical Examples of the Affection which have occurred recently in my own private practice, one of which constitutes the first recorded case where the right side of the Tongue was inflamed and resulted in the formation of an Abscess, while in the other case the Left half of the Tongue was inflamed and resembled somewhat the other Cases recorded. Both Cases, however, present symptoms and other points which are highly important in studying many of the features of this rare and interesting Disease.

It will be better at the outset to give the Clinical History of the Cases referred to and then follow a regular course in studying the affection from various points of view, such as Constitutional.
Clinical History of Case No. 1

On the evening of April 16th 1886 I was consulted by Mr. B., a young man, 23 years of age, who stated his complaint as follows.

Four days previously he had been driving in the country and was exposed for several hours to a cold Easter wind, during which time he had no overcoat which he had omitted to take with him. At thirty-six hours he began to complain of a sore throat and difficulty in swallowing, especially if he attempted to swallow solid food. Next morning his tongue was tender on the right side and especially on putting into the mouth any food either too hot or too cold or any highly seasoned substance. By occlusion, Patient was a butcher.

Hereditary Tendencies - Father died of Apoplexy, mother and sister alive and well. Patient has never suffered from previous illness or accident, does not smoke and is a total abstainer.

His general surroundings at home are of the rare best, but at his work he is much exposed to the weather especially when driving in the country when pursuing his stock. His height is five feet, his weight 10 stone. He is well-developed and muscular and of
a sanguine temperament.
Temperature 100.5°F.

Systems:

Digestive: When I saw the patient four days after the onset of the affection, he complained of difficulty in swallowing, even of liquids, severe pain at the angle of the jaw on the right side, pain in the right ear, in the right submaxillary region, along the muscles of the neck and corresponding portion of the Occipital Region and in the Right half of the Tongue. On questioning the patient he admitted that he had much chattering and chilliness when he felt himself becoming warm. His voice was distinctly nasal in tone and patient answered slowly in response to any question which was asked at him.

On asking the patient to open the mouth the teeth could not be very widely separated but the tongue could be observed impinging on the incisors and canines of both upper and lower jaws. Breath was very foetid and sores caused the teeth. On any opening the jaws more widely the right half of the tongue was seen to be much enlarged, its surface glistening in appearance. While stringy mucous was seen here and there over...
surface and also passed from its edges to the adjoining teeth. The whole organ was covered with a white creamy fur and severe pain was felt when the right half was touched in any way. The mobility of the whole organ was much impaired both as regards protrusion and retraction, as well as, in elevating the tip of the tongue to the roof of the mouth. The margins of the right half were much indented from pressure by the neighbouring teeth and about the middle of the dorsal surface on the right side was a globular swelling, projecting towards the roof of the mouth. This swelling was semi-elastic, much more sensitive than the surrounding inflamed tissue and imparted to the fingers a sensation of their being fluctuation of however a deep-seated nature. The swelling was distinctly confined to the right side of the tongue and was sharply marked off from the left side by the now unusually distinct median raphe. The left side was quite natural in appearance and sensation. Patient also complained of intense malaise on the right side and during examination it tickled freely and so made the examination a matter of greater difficulty.
Patient also complained severely of thirst but was afraid to take any liquids on account of the severe pain which the act of swallowing occasioned. Appetite was absent.

[Note: The text is of unknown significance and cannot be accurately transcribed.]

On asking the patient to open the mouth as widely as possible and draw in his breath as to depress the tongue as much as possible such parts of the tonsils and pharynx as were thus brought into view were seen to be acutely congested and inflamed but the tonsillitis was more marked on the right side.

Barely were constitutional.

Respiratory and circulatory systems - pulse 110 and respirations 36 per minute.

Provisional diagnosis and treatment.

The case was evidently one of Hemi-Glossitis of the right side of the tongue, with Facial Angina. Patient was ordered to go home and keep his bed and on my seeing him later in the evening he informed me that he had had a purgative suppository which had some relieved him. The bedroom was kept comfortably heated, saline lavations, fleecing were ordered and then hot Linseed Poultices. The mouth was washed frequently with a warm and weak solution of Liody's Fluid and hot cleansing
Inhalations also recommended. Internally, a bland and nutritious diet was given and also a mixture containing Chlorate of Potash, Tincture of Belladonna and Tincture of Ipecac.

April 17th: Temperature 101°F., pulse 108, respiration 34; patient obtained 8 hours sleep from the severity of the pain during the night; slight dyspnoea.

In the evening, patient had a typhoidemic infection of Phrenia and Atrophia.

April 18th: Had a better night, slept fairly well, still a good deal of pain, temperature 100°F. Can swallow a little bicarbonate. Patient now gradually improved and in three or four days the temperature was normal.

April 22nd: Tongue is still tender, swelling still present and fluctuation can still be made out so much so that on several occasions one was inclined to give the patient relief by incision. Throat now much better and deglutition and articulation are improved. Voice much less raspy in tone. In about twelve days all symptoms had disappeared and patient returned to his Active duties.

May 1st:

Patient again presented himself today complaining of under the right side of his tongue which had occurred him some trouble during the past few days.
By asking patient to open his mouth widely and raise the tip of the tongue, an abscess could be seen about the middle of the lateral aspects of the right side just at the reflection of the palatine membrane from the right side of the oropharynx to the floor of the mouth. A small incision allowed the escape of about one teaspoonful of pus and gave the patient immediate and at the same time permanent relief. The patient has since then enjoyed the best of health and has never had any further trouble with his tongue.

Clinical History of Case No. 2

W. E., 18 years of age, dyspeptic in trade, was seen on January 11, 1887, complaining of sore throat, painful swelling of the tongue, difficulty of swallowing and of articulation, and entire difficulty of breathing. Duration of illness—four days.

Temperature (6 p.m.) 102.5° F.

History:

Hereditary Senescent—Patient has had several illnesses incidental to childhood but was in perfect health up to the date of attack from which he is at present suffering. His father and mother, two brothers and three sisters are alive and healthy.
The patient always had plenty of nourishing food, is a total abstainer and a non-smoker.

*Type of Origin and Cause of Present Illness*

On January 7th, the patient complained of general feeling of illness, lassitude, inability for respiration and headache. Next morning he was worse, had a severe rigor which was followed by the onset of a sore throat with difficulty of swallowing and of articulation. On the 9th, he was worse and on the 11th he began to complain of his tongue being painful and enlarged. His mother and becoming anxious asked me to see her son which I did on the 11th - that is the fifth day of illness.

**General State**: Patient is about 5 ft. 6 in. in height, weighs 110 lb., fairly well developed and inclined to muscularity. Temperature (6 p.m.) 102.5°F.

**System**

**Alimentary** - Lips somewhat cracked, teeth good and covered with saliva and between the teeth the tongue protrudes somewhat; Rienet and stringy mucous is coming from the mouth and causes the patient a good deal of trouble to get rid of it. On getting the mouth opened the left side of the tongue is swollen and glistening in appearance while its mobility both as to protrusion and...
retraction, as well as elevation, is much impaired. When the left half of the tongue is touched, patient complains severely of pain. The surface of the tongue is covered with creamy white fur and the factor of breath is very marked.

Facies - these show faucial angina as in the previous case but here the left side is more particularly affected. Saliva is increased in quantity. The right edge of the tongue is normal and sharply marked off from the left half. Breaks are manifested.

Respiratory S - there is slight dyspnoea, respiration 30 to the minute, else was working.

Circulatory S - pulse 110 to the minute.

Nervous S - sensory - complains of severe pain in the throat, left half of tongue, left ear, left submascillary region and at the angle of the jaw on the left side. Also along the muscles of the neck in the occipital region. No tearing or ear discharge.

Diagnosis - Left Hemiplegia & Faucial Angina.

Treatment & Progress - Patient was treated very much on the same lines as case no I, but in this case no III telecning was omitted. In this...
patient stimulants (coffee, wine, etc.) were also rendered necessary by the existing depression. It is only necessary to record the temperatures observed and a few details.

January 12th: Morning temperature 103°, pulse 120, respiration 38. Very little sleep due chiefly to severe pain in the left ear which has been treated by dripping in Morphine & Carbolic Oil. Has great difficulty in swallowing.

January 13th: Temperature 101°, pulse 116, respiration 36. Bowels have acted freely, swallows & breaths more easily, slept rather better.

January 14th: Temp. 100°, pulse and respiration becoming again more normal, pain in ear & throat are easier, tongue still enlarged but is going down, still very sensitive to touch. Speaks still with some difficulty.

January 15th: Temperature 99°. Patient's recovery was now uninterrupted and in four or five days the inflamed parts had returned to their normal condition. Patient felt aerobically inclined but little,quine and rice formed with a mild glass of milk. Wash aide materially to his recovery. At all patient would be off work for about a fortnight & by that time he returned...
He has remained perfectly well since that time, and has had no further trouble from his tongue. Such is the Clinical History of the Two Cases of Hemiglositis which I have had an opportunity of watching very closely. As it will be frequently referred to afterwards, I have ventured to add, for convenience sake, Dr. Graves's remarkable Case as recorded in his Clinical Lectures, Vol. II, page 224, New Tydenham Society. The patient was W. B., a medical Student. Dr. Graves found him with severe felt the symptoms of a week's duration, preceded in by violent rigors, great pain in the neck and occiput; somewhat relieved on the second day by purgative treatments. The left half of the tongue became very tender and painful and gradually increased in size. At Dr. Graves' first visit the tongue was enormously swollen and nearly filled the entire cavity of the mouth, which could scarcely be closed in account of the protrusion of the tongue. The right half was perfectly normal and the median line sharply defined the healthy from the inflamed half. Two or three applications of ice bags at a time to the inflamed half, part of which at his
first fact occurred in the tongue of gangrene produced a decrease of the tension and inflammation. Articulation and deglutition were quickly restored.

He is at present (two years, since the attack) able to speak perfectly, although the left half of the tongue is still perceptibly increased in size."

We may now proceed to the nature of Hemiplegia from the following points of view, namely as to its causation, symptoms, side of the tongue involved, cause and result, diagnosis, prognosis, complications, treatment and also the nature of the changes which occur in this affection.

Causes of Hemiplegia

Referring to an attack of Hemiplegia it would seem to be the sex of the individual and the male sex (Mr. Butter's Diseases of Tongue page 44) would appear more liable to take it than the females. All the cases I have seen have been males and at the same there are a number of cases in the male recorded, the only case of its in the female is in Mr. Butter's Book page 45. This is the only case in the female I have found recorded.
Exciting Cause - at the outset we may, in this connection, quote from Dr. Graves' Lectures, page 274, Vol. II, where he observes that "true Syphilitic Hemiplegia is very rare" and it is therefore necessary to enquire to what cause or causes this affection must be ascribed. In Dr. Syce Duckworth's Article, Liverpool Med. Chir. Journal, July 1858, page 201, he says "exposure to cold is the exciting Cause" and with this view I cordially agree as both of my Clinical Cases bear out this statement fully - for Case No. I assigned his illness to his having been exposed in an open machine for several hours to a cold wind and that he was not sufficiently well wrapped up. That cold was the exciting Cause in this case is rendered all the more probable from the fact that the right side of the face was the one exposed to the cold and was that on which Hemiplegia & FACIAL ARGINA developed. Again in Case No. II Exposure must be assigned as the Cause for the patient worked as a dyer and was necessarily subjected to much variation both in the temperature of, and the degree of moisture present in, the atmosphere. Sir Syce Duckworth narrates
in Liverpool Journal (page 146) the case of a stationary Warehouseman who suffered from this affection after a bout of beer and spirit drinking - the affection showing itself two or three days after the indulgence. Sir John Duckworth does not actually say that the beer and spirit drinking was the cause but in such a bout we must take into account the fact that such a man would necessarily subject himself to much exposure as long as his drinking bout lasted.

S. Religan (Graeco Clin. Med. Vol II page 164) relates a case where the whole tongue was inflamed - patient was a countryman, 40 year of age, 6 days was caused by his working for several days up to the waist in water. From these facts we must conclude that excessive cold and wet are the chief factor in causing Hemi-Glositis.

**Symptoms of Hemi-Glositis** -
- Initial symptoms - in most cases the affection is ushered in by a feeling of general malaise. The patient, weakness and disinclination for exercise or in other cases, as in those narrated,
The affection is ushered in by cold chills, which may pass on to rigors and St. Graces' student experienced "violent rigors". Profuse expectoration occurred in Clin. Case No. 1 and also in St. Graces' student. Then the temperature rises. Pain seems to be first complained of in the act of swallowing and is due to the early development of faucial angina prior to the onset of hemi-glositis and Sir D. Duckworth, Liverpool Journal page 237, says: "the frequent preceeding of faucial angina is noteworthy in most of these cases and the Hemiglositis appears to be a later manifestation of the Catanachial Febrile Process". In both my cases faucial angina preceded the onset of Hemiglositis by a period of time varying from 2 to 3 days. Sir D. Duckworth, page 146 states that the Stateiis Mabinson, already referred to, attended the Casualty Department for three weeks suffering from sore throat before Hemiglosisis appeared. Besides the pain from faucial angina, patient soon complains of pain, often intense in the ear of affected side, in the internal maxillary region, angle of the jaw, muscles of the neck and in occipital region in affected half of tongue.
Rise of Temperature

In considering the elevation of temperature in Hemic Glossitis we must remember the coexistence of faucial angina so that both affections have a share in the production of the Pyrexia. In clinical case No. I when seen 48 hours after the evening temperature was 100° F and in case No. II the evening was 102.5° F rising next morning to 103° F which was the highest temperature noticed in either case, defervesence slowly but surely following the commencement of treatment. The fall of temperature was gradual (lytic) about 1° to 1/2° being lost daily until the normal temperature was again reached. This result was attained without the employment of any antifebrile remedies. In W. B. Butler’s Manual of Diseases of the Tongue no actual temperatures are recorded, the only remark being to the effect that patient was "febrile." On the other hand it is rendered possible that a state approaching to hyperpyrexia may exist if we take into account Dr. Graves’ statement as to the case of the Medical Student when he says “that he found his patient with severe febrile symptoms of a week’s duration.” From these above facts one may be justified...
in concluding that the duration of the pyrexia lasts from four to five days in mild cases to seven or eight days in the more severe cases of which Dr. Graces' medical student is a good example.

Examination of the Patient by Inspection
When we are called to see the patient I believe much is to be learnt by Mr. Chene's method of first thoroughly examining the patient by inspection and before any questions are put either to the patient themselves or to their friends.

In both of my clinical cases the attitude assumed by the patient was so similar that one description will suffice for both. In each case the patient was lying semi-recumbent in bed, face flushed, especially so over the malar bones, the alae nasi were acting rapidly, and respiration was uneven in character. The lips and teeth were slightly apart and impinging against and partially passing through between the teeth. Could be seen the swollen and glistening tongue. During one observation the patient could be seen frequently endeavouring with much difficulty to get rid of stringy and viscid mucus from the mouth and throat and his efforts at expectoration
he aided by means of his handkerchief drawing out as if it were the mucous into "strings." When the patient spoke which he did with considerable uneasiness and difficulty as well as actual pain the voice was distinctly nasal in tone and of a peculiar muffled character. The breath was very deep and forced and the teeth covered by foams. Swallowing, even of the saliva, could be seen to be painful and difficult. Irritation was out of the question. According to Mr. Butlin Dyspnoea does not occur in Hemiglossitis and he states" that there is no cause for Dyspnoea in Hemiglossitis." But to this statement I am inclined to take exception as in both of my clinical cases Dyspnoea was complained of although it certainly was not of formidable degree. The existence of Dyspnoea slight in amount is not to be wondered at when we remember that from the swelling of the inflamed tongue that the mouth can scarcely be closed and also by the faucial angina the entrance of air is to some considerable extent obstructed. In neither case, let it be repeated, did the Dyspnoea approach in any degree to that of dyspnoea. The difficulty of Articulation and of
degeneration are also in part due to the swelling of the inflamed parts, but also to the pain which these acts occasions and to the impaired mobility of the tongue.

Appearance of the tongue itself - on looking at the patient's mouth the tongue can be seen impinging against the edges of the teeth and part of it may have passed through between the teeth so as to lie between the partially open lips. In other cases as in St. George's Medical Student "the tongue is enormously swollen and nearly fills the entire cavity of the mouth which could scarcely be closed on account of the protrusion of the tongue". On patient opening the mouth as widely as possible we see the affected half of the tongue is enlarged and the whole of the affected half paralyses of this enlargement, so that the tongue fills the greater part of the cavity of the mouth. Its surface is glistering and edematous and the dorsum is coated with a dense creamy white fur which extends from near the tip over the dorsum to the root of the tongue. The swelling is distinctly limited to the affected half of the tongue which is sharply marked off from the healthy portion by the median raphe which now becomes pinionally distinct.
In certain cases, say in my Clinical Case No. 1, the swelling seems to concentrate itself towards the anterior portion of the affected half and this when touched is more sensitive than the rest of the inflamed tissue. This swelling is globular or oval in shape, semi-elastic to the touch and gives to the tongue the impression of a collection of fluid placed deeply in the substance of the tongue. Unfortunately, the extreme sensitiveness of the tongue and its swollen condition, together with the difficulty of access in examining the condition of parts - all combine in rendering a thorough examination a matter of great difficulty. Streaks of slimy mucus may be seen here and there over the inflamed surface or passing between it and the neighbouring teeth. There is excessive secretion of saliva in the affected side. When the swelling is concentrated in the substance of the inflamed half it causes that half to become somewhat arched in appearance. The mucous membrane passing from the edges of the inflamed half to the floor of the mouth is swollen and oedematous and the surface of the inflamed half is indented by the neighbouring teeth. The mobility of the tongue is much impaired - this applies to movement in all directions.
As to the side of the Tongue involved in Hemiglositis, in all the literature relating to Hemiglositis which I have been able to consult the Inflammatory Action has been confined to the Left side of the Tongue, and I have not been able to find any case recorded where the Hemiglositis has been Right-Sided. Sir James Duckworth, Liverpool Journal, page 201 remarks "that the implication of the Left side of the Tongue in all cases hitherto recorded is certainly remarkable." The Clinical Case first described is therefore unique in that the Inflammation affected the Right Half of the Tongue, and, in the light of the above fact, must be regarded as the first case that has been recorded where this has occurred. In all cases previously recorded the left half and it alone has been inflamed from which the right half has been clearly marked off by the median raphe which now becomes more distinct. Mr. Burrell remarks that in every case the Left Half of the Tongue was either affected solely or chiefly, for when in some of them the Swelling extended to the right half, the left remained much more swollen than the right. Diseases of the Tongue.
Diagnosis - is easy from the symptoms and from the clinical examination.

Cause and result - The usual course of this affection is well illustrated by Clinical Case No. II in which spontaneous resolution occurred in about a week and the organ returned to its normal condition and no trace of the inflammation was left. But in some cases superficial ulcer, excoriations or ulcers may be left as a result of the inflammation.

Mr. Butlin states that the disease does not seem to have been complicated by oozing, ulceration or suppuration. Disease of Tongue page 44. But that such results are possible have actually occurred is proved by clinical cases which have been recorded. Thus when Dr. Graves saw his medical student "the inflamed half of the Tongue was on the verge of gangrene." Again, Sir John Duckworth, Liverpool Journal page 157, says that suppuration may occur and he further remarks that "the cases in which abscess resulted were unilateral." In this connexion Case No. I forms a good example of Hemic Glovitis resulting in Abscess Formation. Again in Mr. Butlin's Book page 45 a case is narrated which was under the charge of Dr. Moore and in this case
"Bouhing" of the surface of the affected side occurred as a result of which "a few excoriations or superficial ulcers" were left.

These foregoing results seem to be mostly temporary in the nature but a more permanent result— that of "Chronic enlargement" is possible. The only instance if its having occurred is in Dr. Graves' Medical student where "two years after the attack the Tongue was still perceptibly increased in size."

Prognosis - The prognosis of Hemi Glossitis is, in the whole, favorable and this holds good whether the right or left half of the Tongue be affected, and in most cases the affection terminates in spontaneous resolution within six or seven days and the inflamed part return to their normal condition. Good, though the prognosis, undoubtedly is, in most cases yet we may occasionally meet with a case in which the distress is more severe as in Dr. Graves' Medical Student who had "severe febrile symptoms of a week's duration as well as great pain". Dr. Graves' 'Clin. Lectures' page 226 Vol II) states the prognosis by saying that "the disease would not appear to be attended by danger but to require
require prompt and active treatment. Again the prognosis will necessarily be affected by the presence or absence of complications or Co-Existent Affections. Of these, one of the most frequent is Fanatical Angina and it adds much to the distress of the patient. It was present in both of my cases and Sir D. Duckworth mentions it as having occurred in several of his cases, one of which had Mereelas for 3 weeks before Hemiplexitis Appeared. W. Cruikshank makes no mention of its having occurred in any of his cases, nor does D. Graves, though we may very strongly suspect its presence both from the difficulty of and pain during Debulking.

No fatal case has been recorded.

Treatment of Hemiplexitis—may best be considered as the local Treatment & the Constitutional.

Locally.

Leeching—in case No. 1 four Leeches were applied to the right sub-mandibular region and the patient being of a Sanguine temperament the Leeches withdrew a large quantity of blood. After they came off, bleeding was encouraged and continued freely for 16 hours, but notwithstanding this free depletion the patient felt no relief, nor was there any visible decrease in the size of the, inflamed, Tongue. Pain
was not in the least relieved. Perhaps had the Leeches been applied directly to the inflamed half, benefit might have resulted, as in Dr. Grases' Medical Student where “two or three applications of the Leeches at a time to the inflamed half, part of which at his first visit seemed in the zone of gangrene, produced a decrease of swelling and inflammation.”

Dr. Outon says “Leeching and Sacrification are hardly ever necessary” Diseases of Tongue page 48, and Sir Dyce Duckworth Liverpool Journal page 257 says “if but half the Tongue be involved it is probable that either Leeches or Sacrification will be called for, but I should condemn the use of either deflating measure and if there was much submascillar pain should counsel the application of 3 or 4 Leeches to the submascillar region and followed by warm poultices.” As to warm poultices - in both of my cases warm leucide poultices were employed every two hours with much benefit.

Relief of Pain - Besides the soothing effect of the poultices Case No. 1 required the Hypodermic use of Morphia (10 gr.) and Atropine Sulph (1/20) to relieve was the pain. Case No. 2 had severe anal pain which was relieved by dropping occasionally
into the ear 15 drops of Olei Carbolici (1:40) 3/4 of Mops Phos
Mintr 2 grs. 1/2 dr. 1 dram for the ear as directed.
Frequent washing out of the mouth - both my cases were
ordered to wash the mouth frequently with a weak and
warm solution of Cordy's fluid. This gave much ease and
helped to correct the colour of the breath.
Use of gargles - Mr. Butlin recommends their use
but the insufflation is so very painful and the tongue
so much impaired in its mobility that their use
seems to me the most undesirable and consequently
I have never recommended their use. But indeed,
for cleansing inhalations, they proved of great
value.
Ice. the sucking of ice is recommended both by Mr.
Butlin and Dr. Lyceh Dunsheath but as sealing
is the inflamed tongue that I have preferred locally
in warmth and moisture.

Constitutionally -
Laxative - in most cases of Hemiplegia and in both of
my cases Cinchpatam excited and the first medicine
given internally should be a smart laxative and by
choice, a saline one. Either a double sedility powder
or a dose of Henry's solution in a small quantity of
water so as to produce a watery evacuation.
I have found that in treating acute conditions of the throat, Chlorate of Potash, Muriatic Acid, and Chloroform, are the most effective remedies. For chronic conditions, I have used Cresol, Belladonna, and Camphor. In cases of extreme pain, I have added a small quantity of belladonna and a few drops of chloroform to the usual combination of remedies.

The prescription ordered was:

R. Creso Chlorat. 3/–
Tarax Belladonna 2/–
Muriatic Acidum 3/–
Chloroform 1/–
Camphor 2/–

Dose: 1/2 teaspoonful q. i. 4 hours.

This prescription has never failed me in cases of severe laryngitis or tracheitis, either alone or complicated with meningitis. After its use for 36 hours or two days, the throat symptoms speedily subside and the laryngeal symptoms gradually subside.

Dietary:

I consider what food is suitable for cases of meningitis. We must bear in mind the nature of the disease so that we may order articles which are free of all - most easily swallowed, Easy of
Digestion as well as of Assimilation. Fluids should form almost the entire dietary and considering the extreme sensibility of the affected parts and also of the superficial ones which they have to pass, it is essential to have such fluids bland and unirritating in their nature. It is useful to tell the patient that in the act of swallowing the head should be thrown as far back as possible and that the mouth be opened as widely as the state of the tongue permits, then the substance to be swallowed is placed as far back as possible on the dorsum of the tongue and the action of gravity aided by a slight contraction of the Pharyngeal and Cricopharyngeal Muscles completes the act of deglutition. I have found that this method, recently described in one of the Medical Journals, enables the patient to swallow most easily and with much less pain. In all articles of diet examined have the chill taken off them before they are presented to the patient. The best articles of diet are milk, Valentines extract of meat, eggs, flanakened up with milk or with some stimulant, such as Brandy, Port Wine or Champagne. Both my cases required stimulants and Sir Sydney Smithworth Liverpool Journal page 202 recommends "the administration of Brandy "pro re nata."

During Curscence -

The internal remedies best suited are Iron, Quinine and Strychnia as well as more nutritious as well as more stimulating diet, while locally as the inflammatory action in the Tongue is subsiding mildly astringent lotions are useful viz. Alum (1/4 gr) or Chloride of Zinc (2 grs) to the ounce of Water.

Remarks -

The nature of Hemic Glottitis -

In considering the nature of this affection it may be remarked, at the outset, that the consensus of opinion is in favour of regarding the disease as a catarrhal acumenis and chronic ulcerous erosions in the opinion expressed by Sir Dyce Duckworth when he says that "Hemic glottitis is a catarrhal acumenis much akin to the hepatic inflammatory attacks which affect the Throat and other parts." Liverpool Med. Chir. Journal July 1873, page 201.

The term catarrhal acumenis which occurs in the above extract indicates the implication of certain nerve or nerves in causing the changes which have been discussed before, and the nerves which are concerned will be referred to in
at a later period.

We have already stated that the disease is looked upon as an Acute Inflamatory Attack and we may support this statement by such proofs as the following:

1st. We regard Hemiglositis as an Acute Inflamatory Affection because its Causes are essentially those associated in the production of inflammation in other organs and parts of the body.

2nd. Because its symptoms, both the Local symptoms referable to the Tongue, and the Constitutional symptoms connected with the body generally, are similar to those occurring in other inflammatory affections.

3rd. Because its results and Complications resemble those which are usually associated with Acute Inflammatory Changes Elsewhere.

Thus, then, as regards its Causes Hemiglositis is an Inflamatory Affliction. It has been before stated that cold and exposure to damp and wet are the chief causes of Hemiglositis and it will be readily conceded that its these causes most inflammatory affections once their origin. How cold and exposure act in producing
Hemiglositis will be considered when we consider the routes through which the irritation must pass.

Secondly - Hemiglositis in its Symptoms, both Locally and Generally, resembles other inflammatory Affectations. The constitutional disturbances in Hemiglositis are those met with in other inflammatory Affectations, such as the lassitude, inability for exertion, the "rigid" or chilliness whose significance is so characteristic. Then the elevation of temperature which continues while the inflammatory action is in progress, and also the Symptomatic disturbances in the other systems of the body - as for instance, in the respiratory system - by the rapid respiration, in the circulatory - by the increased rapidity of the circulation and in the alimentary - by the gastric catarrh and constipation.

Locally - in the Tongue itself we have additional proof of the inflammatory affection as shown by the swelling of the affected portion, by the severe pain in the tongue itself and also in the ear, submaxillary region, angle of the jaw, among the muscles of the neck, and in the Occipital region, by the impaired mobility of the organ with regard to all its movements - protrusion, retraction
and elevation.

3. In its results and complications the disease shows its alliance to other inflammations. Results - the most common result of Acute Inflammation is Spontaneous Resolution and this is what occurs in most cases of Hemiglositis but still further, as other inflammations may end in abscess formation, gangrene, ulceration and chronic enlargement or may Hemiglositis. These latter results though common in other acute inflammatory affections in other parts are very rare in Hemiglositis. Thus only one case of Chronic Enlargement is recorded and it is the case of Dr. Gres's Medical Student's, one case where gangrene resulted is quoted in Mr. Butler's Manual, abscess formation is also very rare so much so that Mr. Butler doubts its recurrence but it does occur and still more remarkable that it should happen only when the "inflammation is confined to one side of the Tongue." Sir I. Buckhurst Liverpool.

Rec. Chir. Journal July 1883, page 197. Ulceration may also occur as in other inflammations.

Again, the complications existing along with
Hemiglossitis also, are of an inflammatory nature. We have already referred to the fact that Farcical Angina is most frequently associated with Hemiglossitis and that the Fossaillitis precedes the development of Hemiglossitis which appears to be "a late development of the Carunculal process". There is no doubt of the inflammatory nature of Fossaillitis and Sir Duce Duckworth regards the motoid process as precisely the same in both of the cases. Yet again the cause of Fossaillitis are exactly those which have been referred to as operating in the production of Hemiglossitis so that the coexistence of the Affection becomes more easily understood.

It must be remembered, however, that all Cases of Farcical Angina are not necessarily by Hemiglossitis so that it would appear to be the Exception and not the Rule that Hemiglossitis should follow Farcical Angina. Again "in some of the reported cases Herpes has been present on some part of the Face" Sir Duce Duckworth Life Journal page 281 and this is widely recognised as an Inflammatory Afection dependent upon Some Remote Change.
Facts, such as the preceding, conclusively prove the nature of Nemic Locatio as essentially a cold inflammatory in character so that I concur in the views expressed by Sir J. Duckworth when he says "Nemic Locatio is a Catarhal Neurosis." Liverpool Journal page 201. The inflammation is therefore Catarhal in nature and regarded this Class of Inflammatory Affecting the Hutchinson remarks that in Catarhal inflammations the exposure to cold is indirect (and thus must be the case in respect of the Tonsil and the Nutritional Change reflect). Medical Times and Gazette Jan. 6, 1883. Owing then that the affection is nervous in origin it will act in a matterially if we systematically treat all the nervous supply of the part concerned namely the Tonsil and the Tonsil, as well as to give physiological facts which have been conclusively proved regarding the junctions which such nerves respectively perform.

Our Anatomical facts are as follows:

Tonsil Tonsillar Supply - Branches from
glosso-pharyngeal and
descending palatine branch from Meckel's Ganglion
The physiological functions performed by these nerves are so concisely stated by Prof. W. C. Hendrick that it is desirable for reference to quote them.

1. The Lingual nerve contains Vasomotor and Vasodilator fibres. If the nerve be divided after the junction of the Chorda Tympani and irritation be applied, then dilatation of vessels will ensue, proving the existence of vasodilator and such fibres come from the Chorda; but if the Lingual nerve be divided before its junction with the Chorda and then irritated - contraction ensues, showing that there are Vasomotor fibres in the Lingual itself. Again it was found by Helpein that irritation of the peripheral end of the Lingual nerve caused constriction & swelling of the Tongue, but if the Chorda Tympani be divided before its junction with the Lingual nerve and irritation...
then applied, no such effect ensued.

II There are two dilator fibres in the Glossopharyngeal nerve as found by the congestion of vessels of the posterior third of the tongue, tonsils, etc., when it is excited.

III Two Accessory Filaments exist in the Hypoglossal Nerve as found by the dilatation of vessels which follow its division. To these facts I may add:

IV That the Chorda Tympani is the nerve passing over the pterygoid process - and there is stimulation, of the substance in the glans is showing the Implication, still further, of the Chorda.

With these Anatomical Facts, as well as Physiological, before us we may enquire into what nerves the Chorda must pass through the irritation be directed so as to result in producing the Acute Angina Hemiplegia? These channels are:

1. the Chorda Tympani Nerve
2. the Lingual after it is joined by Chorda
3. the Glossopharyngeal Nerve.

Now, whilst, irritation applied to any of these nerves will cause irritation in the part, respectively supplied by them dilatation of the blood-vessels will result in congestion of the areas supplied. We must consider especially which nerves or nerves must be implicated, so as to account.
for the congestive changes occurring both in the tongue itself and in the tonsil. How to account for the congestive changes in the anterior two-thirds of the tongue we must have some irritation applied to the Chorda tympani as figured by the physiological facts previously stated, and from the same facts it is evident that to explain the congestive changes in the tonsil and pharynx and posterior third of the tongue there must be some irritation applied to the r. laryngo-pharyngeal nerve which gives branches to the parts involved. Some observers such as De Morveau, asserted the affection to irritation of the lingual branch of the fifth nerve as the swelling, in their opinion appeared to affect chiefly, if not entirely, the anterior two-thirds of the tongue. Mr. Burton in Diseases of Tongue page 43, but it has been previously shown that if the lingual branch of the fifth nerve be divided before it is joined by the Chorda tympani, then although irritation be applied, it fails to produce the congestive changes which follow when irritation is applied to the lingual branch after it has been joined by the Chorda tympani so that congestive changes occurring in the anterior two-thirds of the tongue are due
to irritation affecting the Chorda Tympani nerve.

On the other hand irritative changes must affect the Glossopharyngeal nerve to cause the constrictor changes in the fascial and posterior third of the tongue. In considering the causation of Hemi-glottis we may at once direct our Hypoglossal nerve in this connection as it contains only two constrictor filaments as proved by the fact that the blood vessels dilate when it is divided.

The nerves to which we have limited ourselves in accounting for the production of Hemi-glottis are, therefore, the Chorda Tympani and the Glossopharyngeal. Now we have previously stated and shown that exposure to cold and atmospheric influences are the cause of Hemi-glottis and it now becomes essential to inquire as to what is the Channel by which this irritation reaches the nerves so as to produce this affection. Let us briefly look for this purpose at the anatomical distribution of these nerves.

1st. The distribution of the Chorda Tympani:

"The Chorda Tympani is given off from the facial as it passes vertically downwards at the back of the Tympanum about 1/4 inch before its exit from the stylomastoid..."
foramen. It ascends from below upwards in a distinct canal, parallel with the aqueductus Fallopian, and enters the cavity of the tympanum through an opening between the base of the pyramids and the attachment of the membrane tympani, and becomes invested with mucous membrane. It passes forward through the cavity of the tympanum, between the handle of the malleus & helicis ramus of the incus, to its anterior inferior angle & emerges from the tympanum by the canal of Anquetil. "Gray's Anatomy" page 507.

1st. Distribution of Glosopharyngeal -

For our purpose the distribution of the following branches are sufficient -

The Tympanic Branch (Jacobson's nerve) arises from the petrosus ganglion and enters a small bony canal in the lower surface of the petrous temporal bone - it ascends to the tympanum, it enters the cavity close to its inner wall, and divides into three branches which are contained in grooves upon the surface of the promontory.

Its branches of distribution are, one to the tympanum, one to the fenestra ovale and one to the lining membrane of the vestibular tube & tympanum. It communicates also with the facial.\n
Tonsillar branches supply the tonsils and soft palate
and lingual branches supply the posterior third of the tongue. *Grass Anatomy*, Page 522.

From the above distribution of the nerves concerned in the inflammatory affection we can easily see the points at which the nerves are most exposed to the action of sepsis and in both of the nerves we find that branches of the nerves are contained within the middle ear or tympanum. Thus the Chorda tympani passes through that cavity and it is only protected from the external air by the Membrana tympani itself and by a layer of the mucous lining of the tympanum. Again the glossopharyngeal nerve supplies the mucous membrane which lines the tympanum and like the Chorda has only the Membrana tympani to protect from atmospheric influences. From the Anatomical and Physiological facts which have been previously stated I have come to the conclusion that the atmospheric influences such as exposure to cold and wet, must act on the Chorda tympani and on the Glossopharyngeal nerves through the channel of the external auditory meatus, as though it exposed can so easily
Nerves whose irritation is necessary for the production of congestion in the areas they supply.

That the exposure does not through the external auditory meatus gains additional proof from the following clinical observation:

1st. That on the affected side, both of my patients complained, one of them very severely, of pain in the ear corresponding. This shows that the chorda tympani and the glossopharyngeal in the sympathetic must have been affected by the exposure for a careful examination of the membrane tympani showed no inflammatory action affecting the membrane itself, nor was there any inflammation of the middle ear. Still further, there was no deafness nor any discharge - thus showing the absence of any affection of the middle ear. The hearing power was carefully tested by the tuning fork, by the watch, and by Pollinger's Hörnmerz and no defect could be made out.

Again on the affected side the pains complained of at the angle of the jaw, submaxillary region, along the muscles of the neck, and occiput may be due in part to pressure of the inflammatory secretion, and also to sympathetic affection.
In clinical cases we may remember that the proper side, on which the affection occurred, was the one subjected to exposure for several hours and that the cold wind which patient felt was favorable to the development of this inflammatory action.

3. That the Chorda Tympani and Glossopharyngeal nerves may be primarily affected by exposure is readily understood when we consider the position occupied by them in the middle ear for they have no bony covering and their only protection from atmospheric influence is the mucous membrane lining the tympanum. They are therefore so situated that exposure readily acts on them.

In considering the inflammatory nature of Hemiglossitis for which reasons have been given referring to its inflammatory causes, symptoms, complications and results we have now seen the part which I believe the nerves implicated play in producing the disease.
and Sir Dyce Duckworth remarks "that the irritation (i.e. from exposure) reaches, in a reflex manner, after the fashion of an ordinary castration of the lingual nerve into the Chorda Tympani branch or glossopharyngeal, implicating their trochaic fibres, leading to a sensation of the parts supplied by each. If the castrated stroke fall in both nerves, the attack may be considerably intensified."


"Dr. Lander Brunton has advanced the view which I have already given and which I consider the most worthy of adoption for the reasons already stated - it is "that the irritation may sometimes fall primarily on the Chorda Tympani branch (and I believe the Glossopharyngeal) to the Channel of the Ear of the affected side"."

"Liverpool Journal page 701."

Why the left side of the Tongue has been the seat of Hemiglossoitis does not seem at all clear and the Clinical Case where the Right side was involved was caused by the exposure of that side of the face track to the cold wind. In this connection it may be noted that Sir Dyce Duckworth quotes M. A. Decambro who
reminds that "Neuralgia of the Tongue is chiefly met on the left side". Liverpool Journal p. 201 in footnote. But while Hemiglossitis occurs more frequently in males, neuralgia of the tongue is more frequent in females. Mr. Butler Diseases of Tongue p. 418. I myself have seen only one case of lingual neuralgia: it was not the above statement for it occurred on the left side in a woman. There would thus seem to be, from these facts, a predilection for the left side of the tongue becoming involved in nervous affections, but why this should be so, we have no reason, at present, which will explain this peculiarity. It may be remarked that the concomitant tonsillitis seemed also to fall more severely on that side in which the tongue was inflamed.

Again the fact that the Tonsillitis of the neck is first developed and in a period varying from two or three days to three weeks as in one of Dr. Dyer's cases before the Hemiglossitis showed itself is a point certainly highly remarkable and at the same time difficult to explain. This is
must implies that the Glossopharyngeal nerve is the first to suffer from the irritative change and the "cataural fibrile process" extends later and involves the Chorda Tympani when Hemiglossitis develops. It is more frequent occurrence amongst the male sex may be readily explained by the fact that males are necessarily much more subjected to exposure under all kinds of weather than are females. Otherwise there seems to be no special reason why males should be much liable to the disease than females are but Sir J. G. Bower shows to accept "the present teaching of the Parisian School" when he says that "Persons of the arthritic diathesis seem to be more than others liable to suffer from cataural manifestations of this Character of a hæmoptoe tendency is often associated as part of the process" Liverpool Journal page 458.

I cannot say that either of my Cases exhibited any signs whatever of the arthritic diathesis but I looked upon the disease as one, in these cases at
least, as of an entirely local origin, and having for its cause one also local in the form of exposure. It doubt where debilitating influence are at work the patient became more susceptible to the onset of a constitutional remix such as Hemi Glossitis - as in Sir Syc. Snickers of the case where a drinking bout had gone on for three weeks accompanied by some throat, before the Tongue Effusion developed.

It is only by the accurate observation and recording of the cases of Hemi Glossitis that further knowledge of the disease in all its bearings can be elucidated, and it is with this in view that I have held, so far as we can, in private practice, the particulars of the Clinical Cases which have come under my notice and I am glad to be able to record a case where, apparently for the first time, the right side of the Tongue has been involved, and I trust, that the Clinical Cases and more especially the first will prove an addition of some value to Medical Literature.