3

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[illegible]

Diphtheria

by Wm Hugh Jameson

1863.

This also a creditable thesis (with account of 5 cases) on which I have chiefly a few verbal criticisms to make.

In entering upon such a difficult and important subject as I have chosen for my Graduation Paper, I must express the feelings of diffidence which I naturally have in treating of this singular and interesting disease; — and the more so, that men, who are quoted as authorities on the point, possess each a different theory, a peculiar rationale of its nature, & a distinct & often opposite plan of treatment. — and that all confess themselves incapable of thoroughly explaining or of coping effectually with the affection. —

I however am induced to select this topic for several reasons. Such as, a long residence in those districts of England in which it has been most prevalent and has also presented the most virulent forms — and a special interest in those cases with which I have been brought into contact & with which I was intrusted —

At the same time, I trust my maiden essay will be looked upon as leniently as possible, when it is remembered how difficult it is for a young man to make original researches on an abstruse subject such as this, during a regular attendance upon the ordinary duties of a University student – and also what a serious disadvantage I labour under, in not having the benefit of observing cases actually occurring in Edinburgh, & consequently the opinions of our clinical professors on the point –

I propose in speaking of this disease to proceed systematically and to give. —

1st-ly A brief historical outline of it

2nd-ly — Its Symptomatology

3rd-ly — Its Etiology

4th-ly — Its Diagnosis

5th-ly — Prognosis c̄ its Sequela

6th-ly — Pathology

7th-ly — Treatment

8th-ly — Some of the best marked and most varied cases which have come under my own notice, methodically reported

By Diphtheria then, or Diphtherite as it was first appropriately termed by Bretonneau of Tours in 1818 – we would understand a severe affection of the mucous pharyngeal & laryngeal mucous membranes usually occurring epidemically, & accompanied by fever & excessive muscular prostration – and especially characterized by the formation of pellicles or false membranes about the soft palate, tonsils, air passages, skin, and mucous surfaces generally – Or rather perhaps, it would be more correctly defined as a so-called blood disease, of which the above mentioned throat affection is merely a local manifestation.

Various synonyms have been used by different writers on the subject, E.g. Cynanche maligna, Angina maligna, putrid sore-throat, Scarlatinal angina &c &c – but the term Diphtheria (anglicised by the Registrar-General from the original French name of Bretonneau) has now received the sanction of popular usage –

+ I doubt if it be this craving to have our appropriate carcases &c" occasioned the denial of its antiquity. The imperfections or errors, of most of the earlier descriptions of the disease, may have fairly led to some doubt.

At the same time whilst speaking of nomenclature, I may allude to the unfortunate circumstance of its derivation - διφθέρα, a skin, pellicle - being made a convenient handle of; - for in all obscure cases, where a membrane appears in the buccal & pharyngeal passages, or even on the integument, they are all indiscriminately described as "Diphtheritic" - This, of course, creates sad confusion and most unnecessarily, for this affection has unequivocal & special peculiarities.

It has been contended for by some sticklers for novelty, - for such is the morbid craving for variety, that we would, forsooth, have our unfortunate carcases afflicted with new disorders - that Diphtheria was totally unknown to our forefathers -.

But this is rendered highly unprobable, if it is not altogether disproved, by the writings of the old Italian Physicians & others, who have described a state of things which at any rate closely resembles what occurs in the complaint, as we now see it -

It is quite possible that, like many other diseases, it has become modified very much by time and collateral circumstances –

In tracing the first evidences of the existence of Diphtheria, we may pass over the supposed allusions by Hippocrates, which are at best problematical and too remote for our purpose – as well as perhaps a more definite lesion of the throat mentioned by Aretaeus in the fifth century, as "the Syriac sore-throat" – The first reliable records of Diph. have been handed down from the 16th century – when it is probable, or is rather an ascertained fact that it prevailed in an epidemic form in Spain for a series of years – It is also satisfactorily proved by the Italian account to have next visited their country, appearing in Naples and Communities, then as now, great havoc amongst the juvenile portion of the Community –
Bretonneau has taken considerable pains in collecting evidence since that period, of analogous affections, & mentions an epidemic at Colomna in 1747 – at Orleans in 1748 – and a gangrenous

condition of the throat written off pretty clearly by Grandbillers - He then states that from that date up to the end of the century, multitudes of treatises were written upon it each of them taking different views of the matter, and regarding it either as a complication of croup, or as showing a great affinity to it - His own experience in the matter commenced at Tours in 1818 with the arrival of the La Vendée legion from Bourbon; previous to which he had scarcely seen Cynanche Maligna, and true croup he had only met with twice -
A peculiar inflammation of the gums, or a Diphtheritic phlegmasia made its appearance in the barracks, hospitals, and Scorbutic gangrene of the mouth, which he attributes to a community of vessels, - the comparative immunity of the inhabitants being due to their more cleanly habits - Altogether the number of deaths from the disease, during the three years, 1818-20 amounted to 130 of whom not more than 20 were adults -
Another endemic took place at La Ferrière near Tours -
These outbreaks led to the institution of a

A colloquial or provincial phrase

Commission of inquiry into the matter, which reported that the complication of gangrenous or aphthous angina with croup rendered the distinction of the two affections almost out of the question —
Trousseau, who was a pupil of Bretonneau, and had opportunities of observing the same epidemic, published an account of it in the Dictionaire de Medecine — in 1835 —
In 1856 the French & English newspapers teemed with accounts of a virulent form of sore throat which broke out at Boulogne and scattered the wealthier portion of the inhabitants in dismay — During this year also it appeared in Great Britain — & we have suffered from it more or less since — Every now & again it assumes an epidemic or endemic form —
Unfortunately for one wishing to make reports on the subject, the disease is little known in Edinbro — Dr Abercrombie in 1826 mentions an epidemic which occurred at that time, and distinguished it from croup — So Dr Alison in 1830 —
Professor Laycock in 151 & 158 delivered clinical lectures on the subject, & was the first to discover the almost constant occurrence of the

fungus oidium albicans in the exudation found on the fauces &c, and to trace the probable origin of this disease to the parasitic Epiphyte —
And now let me speak of the

II Symptoms —

These are not at first alarming, but in most cases advance with great rapidity —
In the outset the patient, in the case of an adult, complains, after some exposure to cold &wet, or possibly to contagion, of sore-throat, slight stiffness about the neck, & difficulty in swallowing — has more or less shivering, lassitude, and aching of the limbs, with swelling of the lymphatic glands near the & of the jaw — In fact he complains of "malaise" and the ordinary symptoms of febricula —
On examining the throat — by directing the patient to take a deep inspiration, or by using the speculum oris — the tonsils & soft palate present an inflamed and swollen appearance

and generally exhibit small patches of transuent lymph, resembling coagulated mucus, on a dusky red ground – The Pulse, if the case be seen early is tolerably normal, increasing, however, in rapidity as the disease proceeds – becoming smaller and more feeble sometimes suddenly, & at other times more gradually –
The severity of the attack – or threatened attack – must not be measured by the mere condition of the throat –
The symptoms become speedily aggravated; the febrile excitement increases, & the dysphagia – the pellicle becomes thicker & extends to neighboring parts, especially the posterior nares & pharynx and now assumes its characteristic appearance which is variously described as ash-gray, brownish-gray, or – perhaps best of all – as resembling wetted chamois-leather; – the patches being apparently sunk below the level of the surrounding tumefied textures – The tonsils are especially swollen & project towards the mesial line –
Generally about this time, we begin to observe a peculiar fetid & indescribable odour – by some said to be gangrenous – in the breath; due to the

decomposition of detached & detaching portions of membrane - This odour is almost pathognomonic. The voice also acquires a peculiar nasal twang which Trousseau lays much stress upon - A slight spasmodic, & almost croupy cough often occurs now - and if the membrane penetrate into the air passages, dyspnoea is experienced; if it be nasal, there is a yellowish fetid flux, or possibly Epistaxis -
Salivation too has been seen

Accompanying these physical signs, there is a remarkable depression of spirits and an excessive muscular prostration, so that a strong man may not be able to roll over in bed after a few hours illness -
As the case proceeds, the disease may or may not extend to the larynx - When it is not implicated the patient generally make a slow & tedious recovery, remaining exceedingly liable to sore-throats, & often suffering from sequela which I have mentioned elsewhere - Should the false membrane, however, extend to the larynx, we have increasing dyspnoea & cough - followed sometimes by the expulsion of casts - and lividity of the face, from imperfect oxygenation of the blood -

+ If I understand the intention here, the word
is used erroneously. Do you mean by Idiopathic
origin — an origin independent of contagion or pe-
-culiar poison? If so, — an error. Idiop^c means in-
-dependence on *another disease*, — in fact, — opposed
to symptomatic.

About this period or perhaps sooner there may be noticed albuminuria, especially in bad cases. —
Should the patient not recover, he dies either of apnoea from the laryngeal complication — or as the prostration increases, the fatal issue occurs by asthenia —

III Its Etiology —

The question as to the immediate causes of Diphtheria is a much vexed one, as it is of all obscure disorders, which are manifestly dependent on some so-called blood poison — +
And firstly — May it be developed idiopathically? supervening upon an ordinary cynanche, as a result of a want of attention to the ordinary rules of Hygiene — Such as E.g. ochlotic causes, insufficient and badly chosen food. Mephitic vapours from sewers & water closets, or paludal emanations; — in fact, may it not be idiopathic sometimes, just as the continued fevers and the

exanthemata, wh. are usually contracted by contact or infection, but which have no such assignable cause or source in other instances, and which we therefore in our ignorance allow to be called spontaneous?—

We must indeed grant this—or how should we account for cases which occur sporadically? In many of these latter cases we search in vain for any flaws in drainage, the quality of the food or water, the ventilation &c &c—such as would favour its development—the victims being very often of the better class, living in roomy houses, and seemingly in circumstances in every way conducive to health—hospital experience is very limited indeed, showing of course that it does not especially predominate amongst the poor—

These cases we must be content to pass over, ascribing them to causes similar to those of other widely-spread examples of undoubtedly infectious diseases—As for the contagious properties of diphtheria, though some used to argue that it is not communicable by contact, there can be now no doubt of the fact, if at any rate multitudes of well ascertained instances can prove it—for example in the first case wh.

which I have recorded, the patient evidently caught the affection from her brother, when there had not been, to my knowledge, a single case in the neighbourhood previously – Brettoneau gives several clearly proved instances of its having been produced by contact – So also do Drs Wade, Jenner, Trousseau, Hopkins &c – The house-physician of Dr Laycock was unfortunate enough to contract it, immediately after having received some sputum into his mouth, whilst making some local application to the throat of a patient in the Infirmary – This, by the way, I may just mention here, in passant, is very likely to happen, unless experience has taught the operator, to watch for & avoid sudden expiratory efforts on the part of the patient.) –

Trousseau boldly made some experiments on himself by inoculating his tonsils palate & arms with the deposit from a diphtheritic throat, and found that with the exception of a small vesicle on the arm, there was no result – proving, as he suggests, not that the disease is incapable of transmission but only that mere inoculation is not the modus operandi of the virus –

Besides the more obvious and important exciting causes, there are other accessory circumstances,

Why use the adjective differential here? Diagnosis is derived from (rather it is) a Greek word signifying ~~to dis~~ = ~~[illegible]~~ a distinguishing, — or distinction

IV. <u>Diagnosis</u>

Many observers seem to agree that since the first prevalence of diphth. in this country, the most ordinary attacks of Cynanche tend to assume the diphtheritic character — and also that the local manifestation of the affection is often totally disproportioned to its gravity: sometimes the throat being to all appearance intact, whilst the constitutional symptoms are very severe, the reverse also holding good — Since many throat affections simulate so closely this fatal disorder, we must be careful lest we make some error, which might lead to serious results either by hurtful activity on the one hand, or by still more injurious neglect on the other —

Unless the case happen to occur during an Epidemic we very rarely are called to treat the disorder, until it has made some progress — In isolated cases, the poison has usually begun to produce sensible effects on the system, as may be judged by the dull pasty aspect of the face, by the disinclination for exertion, and by the general appearance of depression — these points being all of consequence in the <u>differential</u> diagnosis of the disease in young children — in whom the

the merely local appearance might be due to some aphthous condition of the mouth, or to thrush - In these latter cases the child usually takes its food pretty readily -
Unless the exudation be fairly visible on the tonsils or pharynx, we had better withhold a decided opinion as to its nature - Should the child - with take its case - be found to have been attacked suddenly during the night, we should carefully watch for anything resembling the clanging cough of croup -
In neighbourhoods where diph. should happen to be prevalent, and especially when it has already attacked some of the inmates of the house, we must look upon ordinary cynanche c glandular enlargements with suspicion, & as likely to assume the diphtheritic character, though there may be nothing special present as yet -
When the throat is beginning to show the patches, the circumscribed eschars quickly running into one another, & in connection with these local signs we find the fetid breath, muscular debility, depression of spirits, and asthenic type appear - then, & then only, can we speak confidently of its exact nature -

Previous to this, we may have to deal with an ordinary sore-throat, or Quinsy, or Scarlatina, or aphtha or even some erysipelatous affections of the throat —

Should Scarlatina exist in the locality, we may consider the probability of Scarlatinal angina — The similarity between diphtheria is such, that many have supposed that diph. may be merely a modification of Scarlatina sine eruptione — The analogy is certainly kept up by the concurrence frequently of the two lesions in the same neighbourhood, or in the same house. — nay even, in some rare cases, they may co-exist in the same individual! —

Granting however a strong analogy, there are several clearly marked points of distinction E.g. the exanthem generally grants an immunity from a second attack; whilst diphtheria is peculiarly liable to relapses as severe as the first attack — this I saw exemplified in a man in England, who had a very severe attack in 1858 and a second in the Spring of 59 wh carried him off —

The albuminaria occurs during the diphtheritic lesion, but as a sequela during convalescence from

Scarlet fever. - Whilst the sequelæ of the two are totally different - In diph we rarely or never see the suppuration of cervical glands as in Scarlatina, though they usually enlarged - Nor yet do we find the permanent scrofulous enlargements so common in children after Scarlatina - Then again the tendency to inflammation of mucous membranes leading often to desquamation nephritis, is diagnostic - pathognomonic - of scarlatina - Whilst some local distinctions are thus stated by Bretonneau - "In Scarlatinal angina the superficial ulceration of the tonsils is rather coated with an intimately adherent membranous exudation, than "covered with membraniform pellicles - and though "a white opaque caseiform secretion appears "to cover the bright redness of the velum palati "and pharyngeal walls - it soon becomes "furrowed and assumes neither the likeness "appearance of a false membrane nor its coherence "the whole of the back of the fauces & nares "being simultaneously attacked by acute inflammation - And lastly it does not tend to propagate itself to the air-passages -

V

Prognosis c Sequelæ -

As Diphtheria is in every instance a very serious disorder, we must very carefully prognosticate the course and expected issue of our case -

The disease is essentially a juvenile, & young children not only showing a greater proclivity to it, but greater danger attends the attack - Thus the mortality has been calculated to be in a direct ratio to the youth of the patient; up to puberty - probably as Dr Wade suggests fully four-fifths of those under ten proving fatal, and only half those over puberty - The supervention of a low muttering delirium must, in this as in all other febrile affections, be looked upon as a very gloomy symptom - as also, to a smaller degree, sudden variations in the frequency and strength of the pulse, frequent and uncontrollable vomiting, profuse epistaxis, albuminuria, lividity of the face and drowsiness -

The importance of albuminuria is very variously rated - some considering it unimportant, and resulting merely from a temporary state of congestion of kidney

Whilst others - amongst whom are Drs Wade and Jenner, Sanderson, Trousseau, Begbie &c - look upon its occurrence with the greatest dread - regarding even a trace of albumen as unfavourable & an abundance of it as an almost certain forerunner of death -
These abnormal condition of the urine & the Epistaxis are probably both due to the same Cause viz: an impoverished and poisoned state of the blood -
In case of a favourable issue, we may loo[k] in many instances some difficulty in deglutition, for a long time - amounting almost to paralysis of the constrictors, and causing regurgitation of the food through the nostrils - together with a peculiar nasal twang in the voice, resulting from paralysis of the velum palati -
Sometimes again disordered innervation may be looked for, in other more remote parts of the body - E.g orbital muscles - partial amaurosis paralysis of tongue, bladder, rectum, calves of the legs - perversion of the taste & other special Senses -
This "Paralysie Diphtherique" as Trousseau terms it, is usually preceded by tingling and slight-

loss of sensibility - and varies in degree, from some disagreeable sensation of numbness, to a total paralysis of the organ -
The patient during a tedious recovery, usually discovers that he is obliged to bolt his food hurriedly, as the power of contraction is almost lost to the muscles of deglutition - On taking a deep inspiration during an examtn of his fauces, the soft palate which should normally be raised & tensed, is observed quite flaccid - the voice assumes the nasal twang of a person c cleft palate - & he may perhaps observe that he cannot read so easily as formerly - On attempting to walk, there is often noticed an unsteadiness in his gait, wh may gradually increase to a complete inability for locomotion -
In other cases again the paralysis may be confined to some muscle or small group of muscles as those of the eye, throat, &c - or frequently to the bladder - Some fatal cases are recorded by London practitioners, in which death resulted after some weeks, apparently from the extension of the paralysis to the heart -
From the perfect recovery which follows Paralysis Diphtheritica - and it does so in the great majority

of cases, however seriously they may have been affected - it is evident that no appreciable lesion occurs in the cerebro spinal centres - and this is moreover confirmed by the absence of all unilateral symptoms, & by post mortem researches - Hemiplegia has never yet been met with in connexion c̄ Diph -
The only explanation which is at present offered of its origin, is that it is in some way, not hitherto understood, due to the poisoned condition of the blood, caused by the absorption of septic matter - as in the variolous paralysis - at least this is the only solution which in default of a better one, generally obtains now -

VI Pathology.

The mode of termination in unfavourable cases varies according to the age & constitution of the patient - and according to the form assumed in the particular epidemic during wh. he succumbs -
Usually speaking, young children perish asphyxiated from the extension of the exudation into the larynx - together with which there may be some tendency to coma -
In adults & in older children whose air-passages are become more developed and less yielding, the fatal issue is in most cases by a low form of septic fever - leading from prostration to low muttering delirium - gradual collapse, & deathly asthenia -
In rare cases death takes place suddenly and quite unexpectedly as if the vital powers were extinguished by some deadly poison -
The Post-Mortem appearances, vary somewhat according to the mode of death, & the time wh. has elapsed since that has taken place -
On examining the throat we find that the Diphtheritic Phlegmasia, has left eschars of various

forms on the parts affected, covered by lymph of different hues & consistency - from black to a dirty white - these eschars sometimes extending down the oesophagus - On detaching the exudation - which has been shown by Gnersant to be under the Epithelial Covering of the mucous membrane - minute red points or Ecchymoses are seen between the mucous and submucous tissues - Surrounding the Eschars the mucous membrane is usually of a dark red congested appearance, & they are surrounded by a thickened ring of pellicle - Sloughs are generally observed about the tonsils & uvula - and the submucous tissue is thickened & tumefied - The Exudation in some cases may only be found about the pharynx & larynx - and it may be present in various degrees from these points down to the minute ramification of the bronchi, & to the stomach - Microscopic Examination of the pellicle shows it to consist, according to Dr Sanderson, essentially of a fibrous reticulum, together c Epithelial Scales, pus, & granular corpuscles, & sometimes though not invariably the sporules & mycelium of oidium albicans, leptothrix

bucealis &c. - These parasitic growths are found more certainly in Muguet, and are supposed to be occasionally accessory to diphtheria of -

Again in the lungs, we find various morbid conditions due to the laryngeal implication - as for example vesicular emphysema, collapse of lung tissue - primary or secondary pneumonia - and depending indirectly on these pulmonary changes, we have congestion of the spleen, kidneys &c. - Then the lymphatic glands in the neighbourhood of the throat are always more or less enlarged softened & inflamed - not suppurated though -

VII. Treatment -

It was formerly the custom to use antiphlogistic measures, at least in the outset of the disease this plan is however now totally discarded - From what has been said of the nature of Diphth. one may see at a glance that its prostrating character clearly indicates the general tenor of our treatment - Accordingly, however men may differ as to the employment of local means, all are agreed on one point, viz that the patient's strength should be upheld from the first - so as to assist Nature in throwing off the poisonous taint - and the vis medicatrix naturae is only to be assisted and guided to a successful issue in this as in many febrile disorders which have a tendency to run a certain course - Our object being, as we possess hitherto no specific treatment, as Dr Watson says of fevers, to obviate the particular tendency to death - to support the vital powers, instead of lowering them by anti-phlogistic means, & to assist in the excretion of effete products -
In the first place, the food which is perhaps the most potent agent remedial we possess, must -

&c. nourishing and easily digestible — Adults are tractable enough when the matter is explained to them, and further our endeavours to keep up their stamina — It is not so however with children — here you must be especially careful that the nurse be instructed to continue the systematic supply of food &c. in small but frequently repeated quantities — for the little patients very reluctantly swallow food at all — partly from the excessive pain caused by the effort, and partly from a positive loathing for food — Convenient forms of easily assimilated nourishment are furnished by beef-tea, mutton and chicken broths, eggs, arrowroot c̄ brandy boiled milk &c — By way of stimulants we may pour in — literally — port wine or brandy to an almost unlimited extent — patients being very tolerant of these potent spirits —
As to the special medical treatment, some have strongly advocated the exhibition of an emetic of Pv. Ipecacuanha in the premonitory febrile stage — perhaps the cases where this plan has been of benefit were not genuine examples of Diphtheria — When the constitutional symptoms have fairly set in, there can be

no hesitation in administering tonics – Iron
especially in various forms will be found useful,
and the Tinct. Ferri Sesquichloridi is now strongly
preferred – In fact it has been regarded almost
as a specific though used empirically – its action
being difficult to explain – Probably as Mr
Bowman suggests it acts as a "capillary styptic
in the local affection" – A common mode of
administration is to combine it with some dif-
fusible stimulant thus; – ℞ Tr Mur. Ferri ʒii
Æther. Chlori. ʒiss Syrupi ℥ss Aqua ad ℥viii M.
℥i sumenda quâque tertiâ horâ –
This preparation of iron has been used freely in
the analogous scarlatinal angina, & in erysipelatous
affections of the throat – From the septic nature
of the disorder Chlorine would seem to be indicated
& accordingly Chlorate of Potash is given in fre-
quently repeated doses of grs v – x –
Bretonneau at one time strongly advocated the
use of mercury; & he recorded several cases
where the plan was eminently successful – He
subjected several soldiers & children to the mercurial
treatment, bringing them as quickly as possible under
its physiological action, by using inunction in con-
junction with the internal exhibition – The number

says mostly recovered, together with a large proportion of the children — though he allows that the most deplorable consequences followed its accumulation when the diph. was arrested — Local means are now generally looked upon as only palliative at best — though Trousseau thinks that by combating the first manifestation of the throat affection we may arrest its progress altogether — The good effects of topical applications being due to the prevention of the absorption of putrid exhalations — In some instances, as in the use of $Ag.NO_3$, the only result produced is that of obscuring the natural appearance of the parts, and thus cutting off one means of diagnosis, or of ascertaining the progress of the disease —
Bretonneau placed great confidence in swabbing [illegible] with Hydrochloric acid — & undoubtedly this may prevent the accumulation of deposit in the pharynx — Dr Jenner recommends the hyposulphite of soda in aphthous where the same [illegible] growths are observed — why then should not be beneficial here? the SO_2 liberated by the acid mucus of the mouth, being well known as a parasiticide —

Inhalation of steam of hot water seems to be serviceable in case of suppuration in the tonsils —
Bretonneau observed pneumonic condensation in cases where hydrochloric acid gas had been inhaled —
Trousseau speaks highly of the insufflation of alum, tannin & other astringent agents, by means of a straw or glass tube —
Again, solutions of permanganate of Potash — as Condy's fluid — and Chlorate of potash have been much used as antiseptics and disinfectants
The hygienic condition of the room should be carefully attended to, seeing that insufficient ventilation & overcrowding — amongst the poor — are avoided; — & hospitals, preventing the younger members of the family from entering the patient's room — this, together with removal from the neighbourhood where the epidemic is, being the only known prophylactic means —

Does the affection admit of tracheotomy? — Bretonneau & Trousseau both recommend the operation, & the latter advised its early performance; — this, however, for obvious reasons, being almost always impracticable — such a hazardous experiment never being had recourse to, except as "dernier ressort" —

Trousseau however asserts that he has saved several children in imminent and immediate danger; - and a year or two ago, a London medical man was snatched from the very jaws of death by timely laryngotomy - his case being accompanied by fever of a sthenic type -
One would naturally argue however that if it be not readily admitted in Croup which is purely a local disease, & owes its destructive tendency partially to the spasmodic action of the muscles about the rima - how much more objectionable, a fortiori, must it be in Diph. where the laryngeal complication is only one local symptom of a general disease? -
All that we can expect usually would be to temporarily avert death by apnoea, & substitute a perhaps preferable termination by asthenia -
The paralytic sequelae, have been hitherto successfully treated by London men, with minute doses of Strychnia or Tinctura Nucis vomicae - with change of air, amongst private patients -

Cases

In making a brief report of a few good samples of Diphtheria, I have to regret that I did not preserve any precise records of date &c — not knowing that I should at any time commit them to paper — The first genuine case I met with will serve as a type —

Miss O — ætat. 13 —

a stout strong girl — the only daughter of a gentleman of considerable means in the wolds of Lincolnsh.; a healthy district — and one where very proper attention was paid to hygiene. Her brother came home from a boarding-school in Notts where diph. was prevalent, after a mild attack of the complaint — <u>His</u> voice was husky, & his throat roughened as if by a recent coating of deposit — his rapid convalescence being an instance of the marked effect of removal from the vitiated atmosphere —

Miss O — (to return from this digression)

was seized on the 24th of July 158 with the symptoms of ordinary sore-throat, rigors, anorexia, wandering pains in the head, back and limbs, dysphagia, thirst, glandular swellings cough, & other febrile symptoms — her skin hot and pungent, pulse rapid & of good strength — On examining her throat the following day, the tongue was, as in most cases threatening to be severe, coated with a greenish slimy fur; and the tonsils were covered with patches of wash-leathery deposit.

On the third day the breath became exceedingly offensive, the odour being perceptible on entering the room — the muscular prostration was excessive, & the naturally lively girl was fretful and in low spirits —

From day to day the examination of the throat showed that the pellicle was extending to the posterior nares, pharynx & lastly to the larynx —

She had passive epistaxis and hæmorrhage from the pharynx — She also showed symptoms simulating croup — the spasmodic cough and throwing back the head & neck — She had at length delirium & collapse — In spite of all

treatment & care. She sank on the 7th of July a fortnight from her first seizure, from asthenia caused by the poisonous absorption — She remained perfectly clear & collected to the last.

The treatment of this patient was at first, I own, totally opposed to our more recently acquired notions on this point —

She had diaphoretics and antiphlogistic treatment generally — blisters round the neck — which, by the way, showed the diphtheritic pellicle — Steam inhalations and caustics locally applied —

After two or three days of this plan of treatment, she was put upon nourishing diet, and had port wine and bark ad libitum —

— No Post-mortem was allowed

Case II

The Cook in the family of the above-mentioned young lady — She was seized a day or two before Miss O—'s death, and suffered precisely in the same way, but in a minor degree — She was ill for three

emetic: Epistaxis and the septic nature of the disease, reducing her to an extreme degree of debility -
By dint of very generous support, which she was more easily persuaded to take than the young lady - she rallied - her convalescence taking place however, very slowly and during it she had great difficulty in swallowing - liquids returning by the nostrils - Her voice was for a long time marked by a disagreeable nasal twang -

Case III

was a Footboy in the same establishment - he was seen early, just after some slight rigors; the exudation however was well-marked; - The timely administration of an emetic seemed to nip the attack in the bud -

(These three cases prove satisfactorily enough, the contagious character of the disorder - they also present three varieties of the disease often met with as regards their severity, duration, and results) -

Case IV

Was a farm-labourer - ætat 25 -
was one of ten men who suffered more or less in one house; six of them dying -
This man slept with four others in a badly ventilated room overhanging the cattle-yard - He recovered from his diphth^{tic} attack, but on going out for exercise during his convalescence, he caught cold, became typhoid, and died -
Here probably the same mephitic influence - or miasm - which caused as far as could be judged his diphtheritic attack, also accounted for his fever or was at any rate accessory to it -

V

(Since completing the foregoing imperfect sketch of diphtheria - a case of the disease has occurred in the Infirmary Edinr, under Professor Laycock's care in Ward XI; and as I have had an opportunity of observing the case and profiting by Dr Laycock's remarks on the subject, I may add it to my list -)

Margaret Poyner -

aetatis 10 - admitted Ward XI - Feby 18th 1863 - An Irish girl of scrofulous habit, but had previously enjoyed very good health - up to within 10 days before this date, when she had a slight attack of rubeola with sore throat - This cynanche was much aggravated by sitting in a draught 5 days before admission -

On admission - her pulse of good strength 120 - a cough wh she had suffered from prior to admission, was almost entirely gone - merely expectorating some frothy mucus - She passed greater part of this & succeeding days sleeping - tongue covered with white fur - On exam of throat the tonsils were found enlarged, red, tumified and

ragged, covered by the ordinary washleathery deposit – which also lined the fauces – Bowels were regular – Urine amber-coloured slightly acid. Sp gr 1015 –
Prof. Laycock ordered thus
℞ Potassæ Chloratis ℥j
Mellis ℥ss
Aqua Camphoræ ℥xiss M
Sign: Sumd ℥iss quâque 4tâ horâ

Feb. 20th Symptoms both local and general slightly aggravated – Patient complained more of the difficulty & pain in deglutition – the pulse of tolerably good strength still 120 – still able to take beef-tea, milk &c –
Feb. 21st Throat rather more extensively implicated – Pulse 110 of moderate strength – tongue clean, of pinkish colour – Dr Laycock pulled off several shreds of deposit, and touched the part freely c̄ the chlorate of potash mixture to wh. was added ℥ij Tinct: Sesquichlorid Ferri. Ordered to gargle her throat with this mixture frequently – also to take half an ounce of Castor oil as the bowels were constipated – Urine cloudy c̄ urates, amber-coloured

Sp.gr. 1039 — & for the first time albumen in small quantity was discovered —

Feb. 22nd Patient much the same — bowels opened by oil — Pulse 108 weaker — False membrane on fauces & tonsils thicker and whiter than hitherto — urine contained much albumen & granular tube-casts —

Feb. 23rd Weaker today — Pulse 108 weak — Bowels not relieved — Throat worse — urine Sp.gr. 1032 — chlorides slightly deficient albumen increasing in quantity — granular casts still found — ordered by Dr L as follows
℞ Acidi Hydrochlorici Dilut: ℥ss Sig: To be used with port wine as a gargle
℞ Tr Sesq. Ferri; Acid Hydrochl ā ʒii
Aqua ad ℥xii — ft. ℥i 4ta quaque hora

Feb 24th Patient rather better — Pulse 128 of good strength — Tongue cleaner but of purplish colour — Bowels constipated — Throat much the same as before; the false membrane perhaps not so copious — urine tested c̄ results, Sp.gr. 1025 — albumen largely present — Takes 8 oz Port wine daily — Ol. Ricini repeated —

Feb 25th Bowels relieved in the morning -
Pulse 120 of good strength - Throat less pain-
ful, but covered with same amount of exudation
Swallowing was so much more easily performed
that she was ordered bread & butter - this she
took and relished - Albumen abundant in
urine; so, water -
Feb 26th Pulse 122 weak - fauces to improved
Feb. 27th Albumen diminished in urine - no
tube cast - false membrane gradually
receding - pulse 140 - tongue cleaner -
Feb 28th Patient feels much better -
On metacarpal joint of middle finger an
angry looking pimple made its appearance
surmounted by erythematous blush - this
increased in size for some days suppurated
gave much pain, & having been thoroughly evac-
uated by incision disappeared slowly -
Might it have been caused in some way
by the diphtheritic poison? -
March 2nd Patient greatly improved - tonsils
nearly free from patches - Albumen diminished
Convalescence rapidly went on from this
date onwards; on the
... 10th was 1st observed the peculiar twang

in the voice - This she retains in a well-marked form up to the present date (25th) - the velum pendulum palati being partially paralysed - Speech is accordingly indistinct and nasal - The albumen disappeared altogether from the urine on the 12th inst -