Aspen with Masses with rusted.

[Signature]
Amaurosis.

For the following remarks on the difficult and somewhat obscure subject, which I have chosen for my thesis, I endeavored to embody and condense all, as many as possible of the theories of the most eminent authors, as to the causes, symptoms, pathology, and treatment, with a short summary of the anatomy of the parts, which most probably may be affected, during the course of the disease.

Amaurosis is to some extent an obscure disease; for, as it is never a fatal one, it is but seldom that a case can be examined as to its pathological conditions, until some time has elapsed from the first occurrence of the disease.

Indeed as Mr. Macartney Jones says, "The diagnosis of this disease requires to be formed in a great measure by exclusion," consequently the theories already promulgated regarding it, although many of them are, most probably correct, yet they are to some extent uncertain, and require
positive Pathological proof of their
correctness.

It was at one time supposed that
Amaurosis was caused by the effusion
of some clear, but dense fluid, behind
the Pupil this drop, received the
names Effusio Nigra, and Effusio Serene
and was alluded to by Addison, when,
speaking of his own blindness, he
said

"So much a drop, serene, half munched
their orb."

This view of the serene drop, however,
has long ago exploded, and although
there is, as before stated, obscurity
as regards the Pathology of Amaurosis,
still much more is known, and as
Medical science yet advances with
steady strides, doubtless, it will before
very long, be definitely determined,
what is the exact seat and nature
of this disease, which we now too
often have no means of determining
during life, and of which very often
no traces are left after death.
The word amaurosis is derived from the Greek, ἀμαυρός, to obscure or darken; and it is best defined by Dr. Mackenzie as "obscuration of vision dependent on a corneal condition of one or several of the corneal parts, which assist in forming the optic apparatus." —

The chief peculiarity of this form of blindness consists in the fact that all the collecting and refracting media anterior to the Retina are intact and perfectly capable of performing their functions; it is very evident therefore that the seat of the disease is behind all these, and must be situated either in the Retina itself or in some part of the nervous apparatus in connection with the Retina. —

It will perhaps be useful to give a short description of the nervous apparatus in connection with the seat of this disease. —

The Optic Nerves originate from the Corpora Quadrigenina, and consequently communicate with the posterior
part of the Medulla Oblongata; they also arise partly from the corpora 
medianata, and the Thalami Optici. Each nerve apparently commences 
by a broad slip of gray matter, 
which winds round the outer edge 
of the Optic Thalamus, to which it 
is adherent. It then crosses to the 
crus cerebri and attaching itself to the 
middle lobe of the brain, is connected 
with the parts which form the floor 
of the third Ventricle, uniting and 
decussating with its fellow of the 
opposite side.—The decussation of 
the Optic Nerves is probably only partial, 
thus the outer fibres continue on, 
without crossing, towards their respec-
tive orbits; the innermost—if at 
all, but merely from one point 
of origin to the other, whilst the 
middle fibres decussate with those 
of the opposite side.—
Now although it is pretty certain 
that the Optic Thalamus are connect
with the optic nerves, yet it has been shown by the experiments of Dr. Spurzheim and Parry that the Thalamus opticii may be nearly obliterated by disease, but that if the optic nerves are unaffected, sight is not necessarily destroyed.

The Retina consists of three layers: First, an external one, called Jacob's membrane which consists of minute, transparent, cylindrical rods, arranged at right angles to the external surface of the middle stratum of the Retina; secondly a middle truly nervous layer, this is composed chiefly of the delicate fibres of the optic nerve which spread out and ramify through a stratum of nerve cells; but it also receives communications from the sympathetic, and it receives also a communication from the third nerve, by which it is connected indirectly with the Iris. It is also believed to be connected with the fifth nerve. It is not difficult to understand from the extent of the field of inquiry, how so many various and
apparently contradictory facts are elicited in a case of amaurosis. - The causes of Amaurosis are many and various, but they may be primarily divided into three groups, viz. First, those dependent on Congestion or Inflammation of the retina, optic nerves or brain, or of all three. - Second. Those dependent on Atrophy of these parts of the nervous system from deficient supply, or from inferior quality, of the blood: - and Third. Those dependent on Structural change in either of the portions of nervous matter as above alluded to. Dr. Mackenzie says that "Those only who have attempted to classify the causes of Amaurosis can form an estimate of the difficulties attached to the subject." - This statement at first somewhat appalled me, but though not presuming to think even, that I am a mere student could improve upon a classification made by so eminent an
Yet I hope that the plan of classification which I have formed, whilst being shorter, though including all the causes which are given by Dr. MacKenzie, yet finds the same time clear.

But before enumerating the direct or immediate causes of amaurosis, that is to say, those which act immediately on the optic apparatus, it would be the better plan to speak of those circumstances which, acting singly or together, tend to produce indirectly a predisposition to amaurotic blindness.

The following compose the first class of the predisposing causes, viz.,

overexertion of the sight, especially on minute objects, as when students read for examinations, by gas light, or as in watchmakers, who are continually working on minute machinery. A long exposure to glaring light especially when combined with heat, long continued and severe exertion,
occupations requiring much stooping. -
Rape; - suppressed discharges of blood;
Perspiration, Purgatives; Constipation;
Too much sleep; - Intemperance; sup-
pression of febrile eruptions; Crops
de Poted; Strokes of lightning; Intestinal
irritation, as from worms etc.; Yeasting,
Typhus Fever. - These causes just
enumerated have a tendency to cause
Predisposition by inducing directly or
indirectly determination of blood to
the head; the next class are those
of an exactly opposite nature having
a tendency to cause a deficient
supply of blood to the head. They
are, excessive menstruation; Chronic
diarrhea; excessive venery; ovarism;
Bright's disease of the kidneys; Scabies;
Leucorrhoea, Fevers, Mental cares and
priests, and with these may be treated
avania, which is in truth a consequence
of most of these discharges.
Some poisons act as predisposing causes, as
Belladonna and Stramonium in large doses
and Vitriol and Lead in small repeated
doses, the two former usually produce a sudden attack of anæmiasis, whereas they do cause it, whilst the two latter, viz., Tobacco and Lead only cause it after long inhibition of the version and very gradually, and their poisonous action is shown rarely in the case of smokers, but more frequently in the case of House-Builders and workers in Lead.

Blows on the head, of fright, and injuries of the fifth pair of Nerves sometimes predispose to Anæmiasis. Hysteric and Arthritis disease as Gout and Rheumatism, also act—sometimes through rarely as indirect caused, and in neither of these forms is there any apparent change of the Retina.

Mr. Laurence and Beer give instances in illustration of these varieties. Beer also speaks particularly of a congenital form of anæmiasis, and he reports several cases in proof of it—but it must be a very rare kind. There are also two intermit
tent forms, first one which sometimes accompanies age, the amaurosis appearing and disappearing with the paroxysms of the fever; it is not common, and second one which is intermittent, but which does not accompany age, but occurs at regular or irregular intervals.

I have divided them, the more immediate causes of amaurosis into five classes, as follows,

I. Congestive and Inflammatory. including,
   a. Varicosity of the Retinal blood vessels
   b. Subsclerotic oedema
   c. Subchoroid
   d. Fibrous
   e. Inflammation and thickening of choroid
   f. Retinitis, acute and chronic with its secondary effects as edema atrophy, hypertrophy, atrophy and lamination of the retina
   g. Inflammation and its effects of the Optic Nerve
   h. Congestion of the Encephalic blood vessels
i. Inflammation of the membranes of the brain, producing adhesions, thickening, and deposition of lymph, serum, pus, etc.

II. The Atonic, caused by deficiency of the supply of blood to the retina and other parts of the optic apparatus including the cerebrum.

III. The structural changes in the retina, optic nerve, and brain, produced by the pressure of more or less solid bodies. This class includes:
   a. Aplasia of the retina
   b. Ectropion of the orbit
   c. Sarcomatous and excepted tumours in the orbit.
   d. Aneurism by anastomosis in the orbit.
   e. Aneurism of arteria centralis retinae.
   f. Tumours of the envelopes of the optic nerve.
   g. Hyperostosis of the cranium.
h. Exostosis of the inner table of the cranium.

i. Lingus, osseous, and other tumours of the Dura Mater.

j. Encephralic Apoplexy.

k. Aneurism of the Encephralic arteries.

l. Enlarged Pituitary body.

m. Enlarged Pinea gland.

n. Hydrocephalus.

o. Tubercles in the brain.

p. Carotidous, osseous, and encysted tumours of the brain.

IV. Structural change produced by more or less direct violence, includes:

a. Displaced crystalline lens.

b. Wounds of the Retina.

c. Concussion and laceration of Retina.

d. Wounds of the Optic nerve.

e. Injuries of the Encephalon in Fractured and depressed Occipital wounds through the orbit; join that wounds; Concussion and laceration of the brain.

V. Structural change caused by disease of the nervous tissue itself, including:

a. Simple or benign growths and...
deposits, as Neurorists of deposits of pigment in, and ossification of, the retina.

b. Malignant growth, as fungus hematoles and melanotic cancer of the brain; and fungus hematoles and melanotic cancer of the optic nerve and retina.

**Symptoms.** The symptoms of anaurosis as Dr. Jones says, "are very various and inconstant; and not one alone perhaps is pathognomonic of the disease;" hence it is difficult to arrange them all under the head of symptoms as is usually done in describing a disease, and the better way would be to give a case illustrating each different kind of anaurosis. But the varieties of the disease are so numerous that they would fill a volume of themselves; hence they could not be given properly in this thesis.

Some authors describe a series of symptoms which they call "objective," such as a peculiar pain, a fixed and staring look, etc. How many of these symptoms which were formerly thought to be character...
otic, although often occurring in amaurosis, are by no means constant; for example, it is stated that in complete amaurosis there is always dilatation of the pupil and immobility of the iris, but experiments have proved that the iris is stimulated to action by mechanical irritation of either the optic or the third nerve, and many reported cases show that, in complete amaurosis of one or of both eyes, the iris often retains its normal activity. Dr. Mayo explained this by showing that, if the lesion causing amaurosis be situated behind the connection of the third and optic nerves, the sight may be destroyed and the motions of the iris may be unaffected. Janin and Schrencker each mention two cases, in which there was complete amaurosis, with perfect mobility of the iris; and Richter says, "Odi unus non raro perfectissima amaurosis occidet, pro rurum pupilla postillis et ad numerosimum luci attractione valde videbatur constituerebat. Nevertheless in a majority of cases, there is dilatation of the pupil and immobility of the iris; and it occurs most freq-
quently after a thickness of long duration, and the longer the continuance of the disease, the more likely are we to find at any rate sluggishness of the Pupil.

Protrusion of the cornea also was once thought to be an invariable accompaniment of amaurosis; but this again is a fallacy, although it doubtless does sometimes occur, and indeed must to a greater or less extent whenever the disease is caused by abnormal dilatation of the Retinal Bloodvessels, by effusion of fluid between the choroid and retina, or by apoplexy of the latter.

Some Authors state that we must always suspect amaurosis when there is a yellowish or greener appearance of the Pupil, and Langenbeck suggests that this change of colour arises from alteration in the condition of the retina consequent on inflammation. On this point, however, Dr. Hayes Walton says, "The
paleness or light yellowness which exists behind the pupil after middle life, is often thought to be symptomatic of amaurosis; it is, however, but the effect of colouration of the lens and is seen both with or without defective nervous power; young persons with amaurosis never exhibit this appearance; it is this colouration that produces so much difficulty in diagnosis in adults.

Richter also gives his views concerning this colouration as follows, "Talem pupillum oculi putta terrena affecti nigrius, sanum, omniqua eitii expertem esse, plerique uno ore affirmant. - Hoc autem assumtur incognitum, unuque iterumque experimur esse, iterum iterumque expertus sum. - Plerunque sane splendidis illo suo que nigrore orba est pupilla oculi, qui amaurosi laborat, languorens illis hebetudineisque, loco vitioso illumque baud sanus unitegque oculus, qui libet illis annuadverteret. - Altiquaque fane insignem saelorem sive..."
fupillam percepti, ut providere
fatetor, dubius alequando habetur,
cataractae incepiente an amaurosi
a per laboret. Facitis tane in hoc
case error est, misprimis superfla
nondum est amaurosis, endique
adhibe pupilla, leniniquae quodam
denso retina paueat. Flures tane,
pro duaffirmare postum, ade
pervenerunt ari, et medicorum
duas, qui cataracta illas laborare
credebat, operationem laterunt.
There is almost endless variety in the
origin and progress of amaurosis,
thus it may become complete
suddenly, or within a few hours,
or it may begin and proceed insidiously
for months or years. It may attain
a certain point and then stop, or
it may be intermittent. The patient
may be able to see well in the
daylight, but loses his sight entirely
at night, or the converse of this, he
may be blind in the daytime and
be able to see tolerably in the dust.
At the commencement of the disease
if it does not occur suddenly, the
light perhaps seems weak and
dull, things seem surrounded
by a halo, or by a cloud, or often
there is an appearance of smoke
or dark Nashville in the day, which
becomes bright at night; the eye
waters on the least exertion. There
may be some intolerance of light,
but much more commonly there
is decreasing sensibility and con-
sequently a thirst for light. Sometimes
the patient can see distant objects but
cannot see near ones, or vice versa.
Blindness appears confused, or he may
be able to see only half a word or half
of an object, constituting hemiopia.
There may be an appearance of a
sheet of light before the eyes and this
symptom often continues into the
later stages, perhaps even when blindness
is complete, giving the patient false
hopes of recovery. Very often floating
bodies, Musca volitantes, appear before the eyes, but it must be remembered that these floating bodies are not invariably a premonitory symptom of amaurosis though they were supposed at one time to be so; these Musca volitantes are incorrectly so named, for they appear like anything but flying flies, and indeed according to Dr. MacKenzie do not move at all; he says "that these motions are merely apparent: if the cause of the Musca volitantes lies below the optic axis, it will produce an impression as if it were placed above the level of the eye, and we imagine to turn our eyes that way, expecting to bring it into the centre of the eye that we may view it more distinctly and in this case the dark spot to seem to fly upwards. - Slowly as the eyes ascend, the Musca again comes into view; thus if the cause lies above the optic axis we perceive it from the same motive, and it seems to move downwards." Mr. Dixon on the
contrary, says, Musco Inflitantes, however, more independently of any movements of the eye itself, for, after these have ceased, the little bodies still continue to glide and whisk about in various directions.

Sirrell attributes them to congestion and inflammation of the choroid, but although they may occur in those affections, they are not even usually produced in that way. This point however has not yet been decided and the pathology of Musco Inflitantes remains yet to be cleared up.

It is frequently the case that when one eye is affected with amaurosis that the sight of the other is lost sooner or later from sympathetic affection. Dark eyes are more frequently affected than light ones.

The amount of pain in amaurosis differs according to the cause of the disease, sometimes there is no pain at all, sometimes uneasiness
scarcely amounting to pain and sometimes again the blindness is preceded by considerable pain, headache, giddiness, &c. &c.

The state of the pulse also varies, being sometimes excited, full and strong, sometimes natural, and at other times feeble and small.

Sensation may be deranged, but is often quite healthy. In fact the symptoms of amaurosis may nearly resemble almost those of any disease of any part of the body which is connected directly or indirectly with the eye or with the cerebrum; hence the difficulty of giving them here in detail, which can only be done by describing cases of each different kind of the disease, with the symptoms which are peculiar to each kind.

Diagnosis. The principle diseases from which we have to distinguish amaurosis are cataract, haemorrhage, myopia, and iritis, &c.
and as most of these may be complications of amaurosis, the diagnosis in many cases is by no means easy. Safely it is true we have had a valuable means given to us, by the introduction of that microcosm and beautifully conceived within the ophthalmoscope, and as this becomes more used, doubtless the pathology of diseases of the eye and their diagnosis will be rendered more easy. It is the more important that a correct diagnosis should be made more especially in the incipient stage of amaurosis, as it is often the case that this is the only time at which treatment is of any use, and because treatment which would do good in some cases of amaurosis would do irreparable harm, in cases of incipient cataract, and again if a case were allowed to go on, as one of cataract, but which was one of amaurosis in reality, the short...
time in which treatment would be available would in all probability be lost.

We must then first ascertain the amount of sight still left to the patient, testing it by a variety of objects of different sizes and colours. We must secondly see if the cornea and lens have any opacity and find out the amount of mobility of the iris in each eye separately and in both eyes together. Next, we should ascertain whether or not there is, or has ever been, any lesion of any branches of the third or fifth pairs of nerves; or if there is any protrusion of the eyeball, which if present would indicate the existence of a tumour or of extra-anomalation in the orbit. In children we must find out if there is any hydrocephaly and whether they have been subject to fits.

If by this time we have not found out the cause of the disease we
must use the catoptrical lenticular test, which was proposed by M. Santar. The inverted image of the candle reflects from the posterior surface of the lens in the normal state, i.e., in incipient cataract indistinct, and in more advanced stages almost altogether so also in the latter stages, is the posterior upright image, whereas in amaurosis occurring in persons in whom there is no yellow discoloration of the lens, the three cdst into images are perfectly distinct, but this test is of most use in the advanced stage, and the opthalmoscope is the best means of detecting incipient opacity of the lens; we cannot consequently trust entirely to the candle test, but must always in addition use the opthalmoscope and it will decide for us whether there is any structural change in front of the retina. It is therefore also the means of diagnosis between
amaurosis and Glaucoma, which is
in fact disorganization of the eyeball.
Mydriasis is a dilated state of the
Pupil, persisting in opposition to the
influences to which the Iris is
ordinarily obedient and unaccompanied
by any other defect of sight than
may be accounted for by such
a rearrangement of the optical adjust-
ment of the eye, and it may be
distinguished from the dilatation
of the Pupil which is sometimes
a symptom of amaurosis by
requesting the patient to look
through an aperture in a card of
less than the ordinary size of the
Pupil, when, if the case is one of
simple mydriasis, he will see
quite distinctly.

If amaurosis coexist without
any other symptoms being present
they are not necessarily indicative
of any disease at all, but if
other symptoms are present, then
they become also of great
importance.
The diagnosis between amaurosis and some other affections of the eye, as Myopia, Presbyopia, Asthenopia Etc., is to be made by ascertaining the history, duration Etc. of the disease, and by the use of the Ophthalmoscope.

Pathology. - Concerning the Pathology of Achyria, there is yet but little to be said. It is still involved in so much obscurity, that there is scarcely anything to be stated as certain regarding it.

Sometimes the whole optical apparatus is apparently perfectly normal, and no structural change to be seen to account for the blindness, whilst in other cases, the changes are great.

Important, the whole retina and perhaps some of the other tunic, being involved.

The retina of an eye dissected by Langenbeck, exhibited increased firmness of texture, with numerous bloodvessels and yellow spots.
In some cases the retina has been found to be thickened, opaque, shoddy, and sometimes even ossified. Professor dissected an eye in which the retina was converted into a white fibrous membrane very firm, and adhering closely to it was a thin osseous stratum; the choroid adhered to the outer surface of this stratum.

In Graefe and Wollensky's Journal there is mentioned by Dr. Pecquet of Berlin a collection of anatomical and pathological preparations of the eye among which is a series of amaurotic and atrophic eyes, in which the retina and ciliary bodies are ossified; the change apparently having begun in the retina at the point of SMEERING and extending outwards.

It has been stated that the central portion of the retina always loses its sensibility first, the circumference retaining its power the longest.

There may be atrophy, if either, of
Optic nerve, of the retina, or of some portion of the cerebrum, connected with
the optic nerve, produced by either defective nutrition, or by pressure;
or there may be congestion or inflammation and consequent effusion or
extravasation, in any part of the optic nervous apparatus or in the brain
itself. There may be then, organic change
in either of the above mentioned parts
of the nervous system, and this
may be produced by accident, by
affection of the nervous structure itself,
or by pressure of tumors, aneurysms,
edectases, varicose retinal veins, &c. &c.
or there may be no discoverable lesion
whatever, even by microscopic investiga-
tion.

Many of the pathological appearances
and symptoms above alluded to,
especially those implicating the cerebrum
itself, are of so important and dangerous
a character, that the amaurosis indus-
cases would be looked upon as
important, merely as a symptom.
of changes of far more importance than those affecting the more retina, as e.g. in those cases produced by compression, and tumour of the brain, etc.

Proposio. - The prognosis in regard to amaurosis depends entirely upon the nature of the cause producing it, but it may be stated as a general law that when the disease begins and progresses gradually until the blindness is complete, or when the amaurosis is congenital, or hereditary, or when it is complicated with cataract, with epilepsy, with fever indicating disease of the brain, or when it comes on in advanced life, in all such cases the prognosis would be decidedly unfavourable. But when the patient is young and the amaurosis not complete or when it occurs suddenly, and is not of long standing, or especially if it is periodical or intermittent or hysterical, then the prognosis is
Not by any means unfavourable.

Treatment of Amaurosis.

To produce any degree of benefit in this affection by remedies, they must be employed with special reference to the pathological conditions of the eyes, brain, and systems generally. The remedies employed are constitutional and local.

The first division of Amauroses viz. the congestive and inflammatory are to be all treated in the same way, for the preliminary measures used for inflammation of the optic apparatus would, in all probability, cure congestion. The special symptoms of this class are, an appearance of cloud before the eyes increased by dozing or training. Intolerance of light; a feeling as if the eyes would burst. The Pupil is usually in the early stages constricted and later it becomes dilated. The Iris often cicatrizes towards the cornea or the whole eye may be more than usually prominent. Usually there
is piddliness, sleepiness, throbbing of the temples. If remedial measures are not adopted, the blindness becomes complete; the eyeball usually feels firmer to the touch than it does normally; the pulse is usually quick and full. This form of amaurosis generally occurs in persons of a phlegmatic habit, but not always; for cases are related of women, who had congestive amaurosis during each pregnancy, and it may, as before stated, be caused in even amoniac persons by irritation of the intestines.

The predisposing causes of this class are those, mentioned in another part of the Theses, which induce determination of blood to the head, such as Stoppage of passages, suppressed discharge, lightening strokes, et c. et c.; and the immediate causes, are all those enumerated in the first division of the Classification.

The prognosis as regards this form of amaurosis is, unless it is caused
by some lesion which is of itself
dangerous to the life of the patient
such as inflammation of the brain
or its membranes, generally
pretty favourable. —
Many plans of treatment have been
recommended for the congestive and
inflammatory varieties of amaurosis.
The primary indications, after having
made a certain diagnosis, are to attend
to the general health, to get the secretory
and excretory functions into a healthy
state etc. This treatment in many
cases of congestion would be sufficient,
thus in that form of blindness caused
by intestinal irritation, by worms etc.
The expulsion of the worms by the
administration of anthelmintics would
probably effect a cure, or when there
are indications of the presence of
undigestible and injurious substance
in the stomach, or of biliary obstruction.
Sometimes would be useful, but supposing
that the amaurosis is not of this
so-called "reflex" variety then more
active measures must be had recourse to.

In congestive and inflammatory amaurosis, Dr. MacKenzie advises in a plethoric, patient, depletion by bleeding, general and local, purging, low diet and rest, and then the administration of Mercury. He says "Mercury has long and justly maintained a high character as a remedy in amaurosis" and Dr. Gravera says regarding this remedy "I have been a witness to its power in suddenly arresting the disease in too many instances, not to entertain a far higher opinion of it than of any other article in the Materia Medica." Mr. Lawrence also says "We must have recourse to Mercury which appears to be as decidedly beneficial in these cases as in crises, or in general internal inflammation." And he continues "when the anti-phlogiotic treatment and a fair trial of Mercury, have failed, I do not know that it is
possible to effect any further essential good by other means."

Mr. Blarain Jones too says regarding it, "The plan of treatment is first the general antiphlogistic plan, consisting principally of bleeding and mercurialization, and afterwards the tonic and alterative, together with counter irritation."

Many authors recommend the application of blisters to the temple, behind the ears, or to the nape of the neck. Mr. Lawrence speaks in favour of this remedy, but he objects to the use of emetic, and so also does Mr. Arber. Holisterch used the actual cautery behind the ears but this is unnecessarily severe treatment. Iodine has been recommended and is often of great service especially when combined with the internal use of Iodide of Potassium. Gunnaeopuces should be given when the blindness arises from suppression menstruation; diaphoretic, when
From suppressed perspiration, and in these cases also warm baths would in all probability be very useful. When suppression of a purulent discharge is the cause, facilities have been recommended to be applied to the sore or sore, if present, and at any rate means should be used to induce the formation of pus, that at the same time that a sore becomes dry, symptoms of anaemiaosis begin. In all these forms of anaemiaosis caused by bad, and immoral habits, or by the nature of the patient's occupation, it is of course necessary in the first place to stop the bad habit if possible, in the one case, and the person's occupation in the other, before any treatment could be efficacious. The varieties of anaemiaosis dependent on the actions of some poison, as belladonna, stramonium etc. are believed to arise by producing congestion consequently the same remedies must be used as in the other forms of
conjunctive amaurosis, and in addition such medicines as would aid in the elimination of the poison from the system. When the congestion or inflammation of the retina accompanies a similar condition of the brain or its membranes, as before stated the amaurosis, produced is only a symptom, and the remedies proper for subserving the disease situated in the more important organs, will also, if successful in their primary object, in most cases, cure the blindness. When we prescribe Mercury in a case of amaurosis we must be perfectly certain that it is caused by either congestion or inflammation, for in many other forms, Mercury would not only not be beneficial, but would most likely do great and perhaps permanent harm; and it is obvious that from the various causes producing amaurosis that neither this nor any other remedy should be used.
promiscuously, for no one remedy could be of universal efficacy.

II. The special symptoms of the second or atomic form of amaurosis are:—a gray network appearance before the eyes, which increases gradually; the vision is improved by any stimulant, as wine etc., or by any pleasurable excitement, and it is on the contrary made worse by all depressing agents; there is no intolerance of light, but usually a thirst for light; the dries is dryness, and the pupils frequently dilated; the conjunctiva are not suffered, and the patient is often anemic. The amauoses of this class usually occur earlier in life than the congestive & inflammatory forms. The exciting causes of atomic amaurosis are as before-mentioned exhaustion of the system produce by excessive, or long continued discharges; by bad habits; by fever, and by mental anxieties; and
the immediate cause is a want of the proper supply of blood to the optic apparatus.

The prognosis in these cases is usually more unfavourable, than it is in the first class. If there, there are no inflammatory symptoms present, but, on the contrary, debility, anaemia, nervousness, etc., etc. Tonics and stimulants—both internally and externally—are required, a light nutritious diet, change of air, rest for the eyes, moderate exercise, means to improve the digestion, and to irrigate the bowels and secretory viscera into a proper condition, and an end must be put to any exhaustive discharge, if such be present. In this class of cases as a rule emetics do more harm than good; they may sometimes be used with advantage, however when the digestion is not good, but they must be followed by remedies which strengthen the digestive organs and uvana.
...system such as bark and tamarind. These remedies, but especially bark, are much recommended by some authors, for the treatment of periodic and intermittent cases, but they are not always successful as is shown in the case of a man, mentioned by Richter, who became blind every other day at noon and recovered his sight at the same time on the following day whenever the patient took bark; the duration of the blindness was doubled. Small doses of crude Veronica (extract) are recommended by some authors. Numerous supposed specifics have been recommended by various authors, as by Warner, Sagar, Schmucker, St. Yves, etc. Richter and Keer applied cold and stimulating washes to the eye, and many other stimulant colligia, and other applications, for instance scarpa speaks in favour of the injection of tincture, ammonioa directed to the eye.
and if stimulating powders to be taken as snuff, but few of these are ever of any use, and Mr. Gravers says that he had never obtained any advantage in amaurosis from applications made directly to the eye. Larrey advises the application of heat in the course of the facial nerves and in this he is followed by Majendie, who also applied blisters as near as possible to the nerve. -- Majendie used dressers' ware and they speak in favour of galvanism, and the two latter gentlemen have reported many cases successfully treated in this way. Scarpa also applied electricity and with success.

Baker advised the use of Must, Castor, Alesperenta etc. Mr. Lawrence uses subcutaneous inflammatory and blisters to the temple and eyebrows. -- Mr. Lister, Dr. Short and Heathcole have employed tincture of applied to a blistered surface with great
success in this form of amaurosis. Some believe to apply blisters over the supra-orbital nerve.
Mr. W. Jones thinks strychnine of but very little use in amaurosis. Catapults of capsicum have been used apparently with advantage in warm climates.

Sometimes Tincture of Saffron is applied to the temples, or the forehead rubbed with cajuput, resin oil, or with a solution of veratrum viride alcohol.

But the treatment of this class of the auras is essentially, first, to put an end to the exciting cause; then in excessive discharges, endeavour to stop them, the voluntary ones by moral suasion or command, the involuntary, by appropriate remedies. Secondly, to restore the strength of the system, by change of air, tonics, and nutritious diet, attending at the same time to the actions of the secretion and excretory organs.

III. The Third Division of the Amaurosis
vir. Those forms dependent on the pressure of more or less solid bodies and the structural change induced by that pressure, include all those varieties produced by the causes enumerated under number vii in the Classification.

This class of cases as will be seen by the causes producing them, is usually a very hopeless one, and the treatment is almost always restricted to the merely palliative.

To take them in their order, first, Apoplexy of the Retina, this is usually sudden, caused by violence, by sudden flow of blood to the head and eyes or by obstruction being impeded. The symptoms in aid of its diagnosis are, its suddenness, the flushing of the face, a full slow pulse and vertigo. If caused by mere over distention of the Retinal veins, bleeding will remove it, but if there is extravasation the cure will take place gradually as the clot is reabsorbed and this absorption
should be aided by a moderate course of mercury or of Oxide of Potassium.

Exostosis of the orbit. Symptoms: pain, tenderness of the eyeball: sometimes the tumour can be felt, when an attempt may be made to remove it by operation, but usually its treatment is either antiseptic or antiterapeutic, as Strum and syphilis are commonly the causes of the disease.

When sarcomatous or cystic tumours can be felt or diagnosed, an attempt to remove them may succeed, but the treatment usually is either to excise the eyeball together with the tumour, or to leave it alone.

Aneurysms of anastomosis in the orbit, symptoms: pain in the eye and head, a snap or crack felt in the orbit followed by whizzing in the head, blindness, proptosis, and pulsation in the eye. The progress in this form is most rapid.

The treatment, as recommended by Messrs. Syme, Graves, Darbyshire, and Wardrop, consists of ligation of the carotid.
Aneurisms of the arteries centralis retinae and tumours of the envelop of the optic nerves could not possibly be diagnosed consequently no effectual treatment could be employed.

Again in Hypertrophy of the Cranium: exostosis of the inner table; fungous, oesceous and other tumours of the sphenoid, aneurism of the sphenoidal arteries, enlarged pituitary or Pineal bodies, tubercles in the brain, and Carotidoginous, oesceous and encysted tumours of the brain, no accurate diagnosis could be made, and the treatment would consequently be directed only to prevent confection of the head and to palliate as much as possible the nervous symptoms produced by the pressure of the tumour or foreign body.

In Encephalitis, Apoplexy, and in Hydrocephalus, the remedies appropriate for those diseases, if successful would also cure the Aneurism.
or the second one, of structural change, caused by violence, includes those forms, the immediate causes of which are enumerated under No. 7 in the classification of causes. In some of these the prognosis is favorable, in others the reverse.

Displaced cataractous lens. This may be produced by a blow on the eye or by the needle of the oculist in tucking for cataract, and the lens causes aknorrhoea by pressure and perhaps ultimate disorganization. The treatment would be if possible to bring the depressed lens forwards by a needle but if this is impossible, to use medicines to aid its absorption, at the same time keeping down any tendency to inflammation in the eye.

In wounds and concussion and laceration of the retina, and in wounds of the optic nerve, the treatment is to wrap the eyelids together and put the patient on strict anti-ophthalmic regimen.
In injuries of the brain... The... to such lesions, and the cure of the... would follow that of the more important injury.

The fifth form of amaurosis, or the third form of organic change producing amaurosis, is that caused by idiopathic, malignant or benign disease, and it includes, neurorhachitis of the retina, melanotic deposits in the retina,notification of the retina, and these though all of them benign are totally incurable. The malignant diseases which produce amaurosis are Syphylis, hematomata, and melanotic cancer of the optic nerve, and similar conditions of the brain. These also are perfectly hopeless cases, not only as regards the patient's sight, but also for their lives. In such cases... consequently it is impossible and... treatment... with the exception of... spices and keeping up the patient's strength as long as possible is all.
I am aware that I may, to some extent, be accused of presumption, in the first place, for choosing so obscure and difficult a subject for my theme, and secondly, for attempting to form a new classification of the causes of the disease an enterprise which the most eminent men have pronounced to be most difficult.

As regards my choice of a subject, the reasons that I decided upon aneurysm were 1st. that a relative has long suffered from the disease, and 2nd. that at the hospital in the South of England which I attended before coming to Edinburgh, I saw a great number of cases of the disease in question.

As for my attempt at a new classification of causes of aneurysm, I merely attempted to put them into a form which might be easily understood and be at the same time shorter than those usually given.

It only remains for me to hope, that I have, in this short thesis included
most, if not all, of the facts, which have up to this time, been ascertained, regarding aneurysms, as demonstrated by the eminent surgeons of this and other countries.
The second rate of interest.