

DEFINITION

1. **Optic Atrophy** is the term used to describe the condition of the optic disc following degeneration of the optic nerve.

CLINICAL MANIFESTATIONS

2. The usual symptom is that of slowly progressive visual loss. This may be either unilateral or bilateral, depending on the cause, and also may be of quicker onset when due to vascular occlusion or trauma.
3. The extent and type of visual field loss depends on the underlying cause.

CLASSIFICATION & AETIOLOGY

4. Optic Atrophy has been classified into –
 - 4.1. **Primary or Simple Atrophy**, which results from primary damage to the nerve fibres.
 - 4.2. **Secondary Atrophy**, which follows any injury or direct pressure affecting the visual nerve fibres in any part of their course.
 - 4.3. **Post-neuritic atrophy**, which follows papilloedema.
 - 4.4. **Consecutive atrophy**, which follows extensive disease of the retina.
5. **Optic Atrophy** may arise from a wide variety of pathological processes, including
 - 5.1. Optic Nerve Hypoplasia, a congenital defect of varying severity sometimes due to maternal diabetes or quinine ingestion.
 - 5.2. Heredo-familial Disorders, which are genetically determined conditions. These include –
 - 5.2.1. Cerebromacular degeneration, due to abnormal lipid storage disorders – eg. Tay-Sachs disease
 - 5.2.2. Hereditary Ataxias.
 - 5.2.3. Stargardt's disease which is an autosomal recessive condition presenting between 6-20 years of age and which produces a central scotoma.
 - 5.2.4. Retinitis Pigmentosa. Degeneration of all of the retinal layers occurs with progressive visual impairment leading to tunnel vision and often to total blindness. The condition is also associated with mental retardation (Laurence-Moon Biedl Syndrome).

5.2.5. Leber's Optic Atrophy.

- 5.3. Syphilitic, which is becoming rarer but once caused 40% of all cases of optic atrophy.
- 5.4. Toxic, due to tobacco, alcohol, arsenic, lead and drugs such as quinine, ethambutol, chloramphenicol, Streptomycin, sulphonamides, chloroquine, oral contraceptives, phenylbutazone and indomethacin.
- 5.5. Pressure resulting from glaucoma, Paget's disease in the optic foramen, aneurysms and tumours.
- 5.6. Trauma causing direct injury to one (or rarely both) optic nerves through head injury. The eye is usually completely blind but an incomplete lesion can give a localised visual field loss.
- 5.7. Ischaemic causes such as arterial occlusion and anaemia.
- 5.8. Inflammatory reactions such as a spread of an adjacent inflammation such as meningitis or in a general condition such as Disseminated Sclerosis.

CONCLUSION

6. **Optic atrophy** is a condition resulting from degeneration of the optic nerve. There are many causes of such degeneration and these have been listed above.

REFERENCES

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