



Fig. 1A.18. Early venous phase.

Venous phase. In the venous phase the veins are at first laminated (Fig. 1A.18) and later the whole venous blood column is visible though intensity becomes less.

Late phase. If the blood-retinal barrier has been broken the dye leaks out and (1) stains the abnormal vessels or (2) pools as a collection of fluid (Fig. 1A.18) or (3) can be seen on the disc.

The macular area, as can be seen in fluorescein angiography, is depicted in Fig. 1A.22.

The fluorescein angiograms should be interpreted on the basis of hypo- and hyper-fluorescent areas as given in Table 1A.1.

OPHTHALMODYNAMOMETRY

Ophthalmodynamometry is a simple and harmless procedure but of little clinical value as far as clinical diagnosis is concerned except in the diagnosis of occlusions of the proximal carotid system and in assessing the effect of surgical ligation of carotid artery. It has also been used, though unconvincingly, in general hypertension, intracranial hypertension, toxæmias of pregnancy, simple glaucoma, etc., both for diagnosis and prognosis.

The ophthalmodynamometer is a spring gauge calibrated to reflect pressure applied to the eye (Fig. 1A.24). The instrument was devised to measure the pressure in central retinal artery but the compression of central retinal artery to collapse only measure the lateral pressure in the ophthalmic artery.

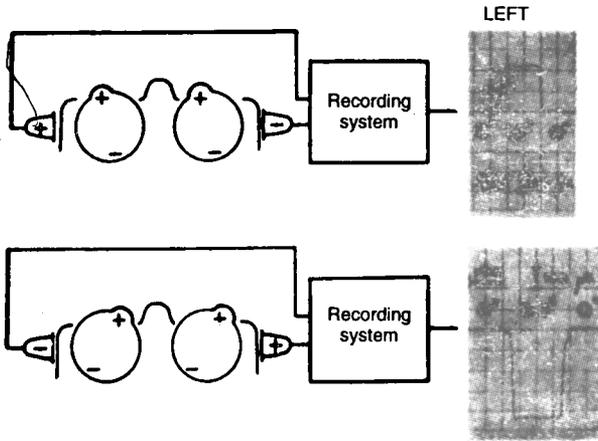


Fig. 1A.35. Recording of EOG.

on the skin near the canthi (Fig. 1A.35). Adaptation affects EOG in a manner opposite to that of ERG. Dark adaptation decreases the amplitude and light adaptation increases the amplitude. The maximum amplitude in light adaptation compared to the minimum amplitude in dark adaptation gives the EOG ratio (Ardin ratio).

Ranges for EOG ratio are :

0	Normal	> 2.00
1	Probably normal	1.80-2.00
2	Probably abnormal	1.60-1.79
3	Abnormal	1.20-1.59
4	Flat	< 1.20

Being a ratio it is unaffected by variables.

Clinical applications

The EOG decreases in most retinal degenerations and parallels the ERG response. The exceptions are Best's disease (vitelliform macular degeneration) where EOG is abnormal even in carriers whereas ERG is normal. In retinopathies due to chloroquine and other anti-malarial drugs EOG shows earlier abnormalities than ERG. Supernormal EOG reflects metabolic activity in retinal pigment epithelium and neural retina and hence is complementary of ERG.

Visually evoked response (VER)

The visually evoked response (VER) or visually evoked potential (VEP) is produced by electrical activity of the visual cortex in response to light or pattern stimulation of the eye. The response is a complex and a gross electrical signal, but by computer averaging techniques it is possible to record VER. The entire visual cortex (area 17, 18 and 19) contributes to

PLATE II

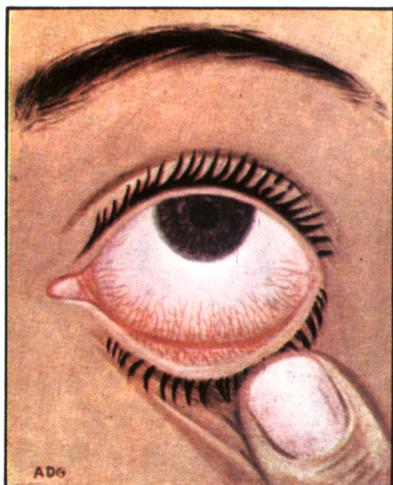


Fig. 1
Conjunctival type of congestion
(May and Worth)

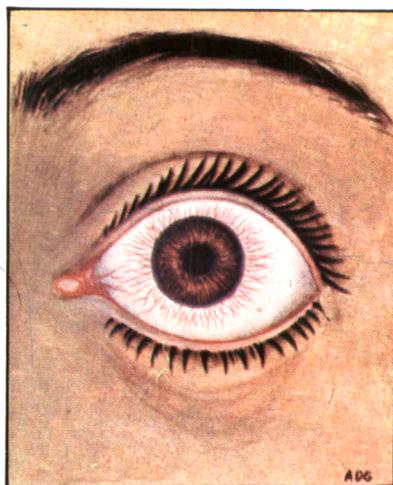


Fig. 2
Circumcorneal or ciliary congestion
(May and Worth)

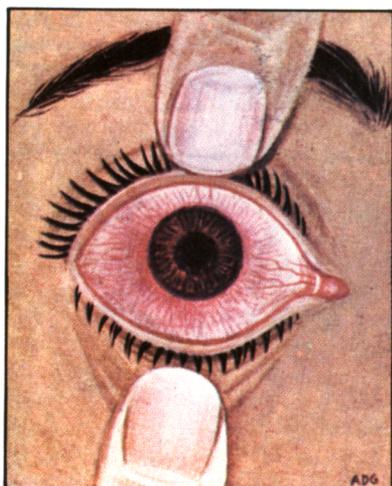


Fig. 3
Ciliary and episcleral Injection
(May and Worth)

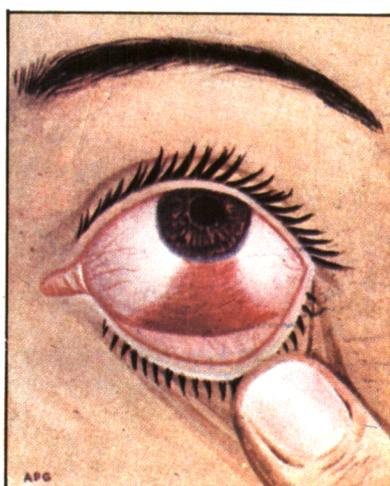


Fig. 4
Subconjunctival Haemorrhage
(May and Worth)

PLATE III

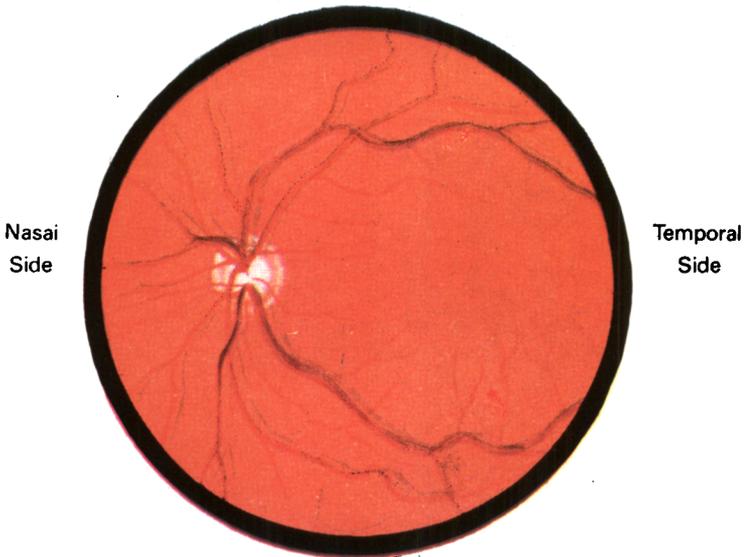


Fig. 1 Normal fundus of the left eye as seen by a direct ophthalmoscope. The oval area on the nasal side is the optic disc. The tiny circular area at about $2\frac{1}{2}$ disc diameters on the temporal side of the disc is the fovea centralis. The wider and darker vessels are the retinal veins and the narrower ones are the retinal arteries (Magnification about 15 times)

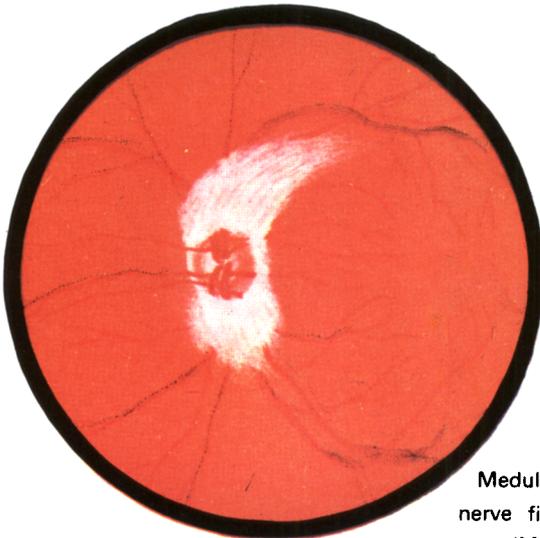


Fig. 2
Medullated or opaque
nerve fibres in the retina
(May and Worth)

CONTENTS

<i>Chapter</i>		<i>Page</i>
IA	Special Investigations of the Eye	1A.1
I	Examination of an Eye Case	1
II	Geometrical Optics and Optical Constants of the Eye	22
III	Errors of Refraction, Presbyopia and Anisometropia	33
IV	Anatomy and Diseases of the Conjunctiva	41
V	Anatomy and Diseases of the Cornea	85
VI	Anatomy and Diseases of the Sclera	113
VII	Anterior Chamber of the Eye	117
VIII	Anatomy and Diseases of the Uveal Tract	122
IX	Anatomy and Diseases of the Lens	139
X	Anatomy and Diseases of the Vitreous	159
XI	Intra-ocular Pressure and Glaucoma	162
XII	Anatomy and Diseases of the Retina	201
XIII	Anatomy and Diseases of the Optic Nerve	218
XIV	Visual Pathway and Its Lesions	226
XV	Ocular Motility and Squint	231
XVI	Nystagmus	251
XVII	Anatomy and Diseases of the Eyelids	253
XVIII	Anatomy and Diseases of the Lacrimal Gland and Lacrimal Passage	272
XIX	Anatomy and Diseases of the Orbit	283
XX	Eye Changes in Systemic Diseases	293
XXI	Symptomatic Disturbances of Vision	301
XXII	Injuries	304
XXIII	Ophthalmic Instruments	318
XXIV	Eye Operations	331
XXV	Blindness Profile and Its Control	349
XXVI	Psychosomatic Disorders	351
XXVII	Lasers in Ophthalmology	362
XXVIII	Therapeutics	390
XXIX	Ophthalmic Prescriptions	422
	<i>Index</i>	433