

HYPERTENSIVE RETINOPATHY

DEFINITION

Damage to the retina from injury to the vasculature from the hypertensive process

-Ocular changes may be first sign of need for hypertensive treatment in asymptomatic patient.

-Symptomatic patient w/ visual changes from hypertension may need to be referred to ophthalmologist.

**ETIOLOGY/ PATHOPHYSIOLOGY
due to ischemia and exudate-**

1. Earliest changes in the terminal arterioles.
2. Chronic changes in the main arterioles
3. Changes related to auto regulation of vessels and ocular/blood barrier-
 - a. Retina-strong regulation and barrier
 - b. Optic nerve-fair regulation/poor barrier
 - c. Choroid-poor regulation and barrier

CLINICAL

Symptoms-

Acutely-Headache, Blurred Vision, Usually
Diastolic Blood Pressure Greater Than 115

Chronically-Asymptomatic Until Significant
Changes

EXAM

w/acute malignant hypertension-

1. Focal intra-retinal peri-arteriolar transudates (FIPT) are only seen in malignant arterial hypertension=

Focal, oval, small, white lesions-deep in retina, associated with major arteriole vessels. Not= cotton-wool spots.

With dilation of vessels. No occlusion.

Increased flow with leak.

2. Optic disc edema

Other Findings-

1. Cotton-Wool Spots-fluffy, white lesions-level of nerve fibers= non-perfusion
2. Micro aneurysms from capillary obliteration
3. Not Seen --Blot retinal hemorrhages
4. Cystoid macular edema> Retinal detachment

Chronic hypertensive changes-

1. Narrowing of vessels-
 - a. Copper- (red-brown sclerosis)/Silver (opaque sclerosis) wiring of arterioles
 - b. Arteriovenous nicking(stretching of basement membrane of vein)by arteriole
2. Retinal hemorrhages
3. Vascular tortuosity
4. Patches of atrophy
5. Optic disc pallor

TREATMENT

For hypertensive emergency-

1. Nitroglycerin.
2. IV Beta Blocker-Labetalol, esmolol,
3. Hydralazine
4. Vasotec

For Chronic Disease -- Numerous
Medicines

FURTHER TESTS

1. EKG
2. Bun/creatinine
3. Possible head CT scan

EPIDEMIOLOGY

-20% of population has hypertension

-70% of people over 70 have hypertension

PATIENT EDUCATION/HEALTH MAINTENANCE

-Control weight, lipids, alcohol consumption,
sodium intake

-Regular exercise

-Take hypertensive medication