

Coats' Disease

Background

- Described by Georges Coats (Scotland) in 1908
- Unilateral retinal vascular abnormalities and retinal exudation in young males
- Similar to Leber's description of a similar condition in 1912 called Leber's disease

Clinical Features

- **Idiopathic retinal telangiectasia**
- **Intraretinal and/or subretinal exudation leading to retinal detachment**
- **Peripheral retinal nonperfusion**
- Vitreous relatively normal
- Sporadic
- No systemic abnormalities
- Unilateral (if bilateral second eye is very mildly affected)
- Male in first or second decade of life
- Xanthocoria

Differential Diagnosis

- Retinal tumors
 - hemangioblastoma
 - retinoblastoma
 - choroidal hemangioma
- Exudative vitreoretinopathies
 - Retinopathy of Prematurity
 - Familial Exudative Vitreoretinopathy
 - Norrie disease
- Other causes of leukocoria
 - retinal hemorrhage
 - toxocariasis
 - persistent fetal vasculature
 - coloboma
 - endophthalmitis
 - CMV retinitis
 - toxoplasmosis

Classification

Stage	Fundus Features
1	Retinal telangiectasia only
2	Telangiectasia and Exudation
	A Extrafoveal exudation
	B Foveal exudation
3	Exudative Retinal Detachment
	A Subtotal detachment
	A1 Extrafoveal
	A2 Foveal
	B Total retinal detachment
4	Total retinal detachment and glaucoma
5	Advanced end-stage disease (phthisis with pain)

Adapted from Shields JA, Shields CL, Honavar S, Demirci H. Classification and management of Coats disease: The 2000 Proctor Lecture. *Am J Ophthalmol* 2001;131:572-83

Laser Treatment

- Diode 532nm recommended by Shapiro et al.
 - Power generally 400 to 750 mW
 - Duration 1000 ms
 - Rapid interval cycles to simulate near continuous treatment
 - endpoint: telangiectatic vessel whitening
- Diode 810nm recommended by Villegas et al.
 - Large (1.2 mm) spot size
 - Power typically around 350 mW
 - treat entire surface of telangiectatic vessels and/or exudative detachment as well as the avascular retina.
 - endpoint: complete whitening of the telangiectatic vessels
 - add bevacizumab 1.25 mg

Anti-VEGF Treatment

- adjunctive treatment
- 1.25 mg via pars plana

References

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