

Management of Diabetic Retinopathy

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DM juvenile type means that the insulin secreting cells in the pancreas are either insufficient in number or function, due to a genetic error, even if it appears clinically after many years of age.

DM adult type is due to insufficient secretion of insulin hormone relatively to the body gross weight.

Ophthalmic complications of diabetes follow an individual variation, not related to the blood postprandial levels. Duration of the disease is much more important than the level. For example, early and good correction of blood glucose level is just a factor, but it does not prevent the occurrence of diabetic retinopathy.

Six to ten years after true discovery of diabetes can put the patient into 2 categories:

- a) Patient resistant to diabetic complications.
- b) Patient susceptible to early or severe complications.

As diabetes affect mainly the venous circulatory system, the goal of management must be directed to this part by: 1) Photo coagulation, 2) Intravitreal injection, 3) Vitrectomy.

Argon laser photocoagulation produces two main actions; Cautery and scarring of the equatorial part of the retina which induces vascular shunt between the end retinal vascular system and the highly vascularized choroid behind. This enhances the retinal circulation of the rest healthy retinal tissue, so a) The application of Argon laser must be heavy and deep excluding the central parts of the retina, respecting the nerve fiber map. b) Superficial and even deep microaneurysms have to be cauterized cautiously by the laser. c) Photocoagulation must be applied early and on sessions to follow new vascular microaneurysm development.

Intravitreal injection

- Anti-VEGF injections can treat or prevent edema of the macula and paramacular area for certain time and needs repeated sessions.
- Cortisone intravitreal injection can also be useful.

Both can be combined with observation of the intraocular pressure and lens change.

Vitrectomy

Removal of the vitreous bulb of diabetic eye can benefit in cases as it: a) Facilitates local intravitreal injection treatment penetration to the retinal vessel. b) Avoids vascular growth of new vessels or fibrous activities of the retina and tractional retinal detachment.

All these methods of management can be applied collectively according to the severity.

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