

DIABETIC RETINOPATHY

Diabetic retinopathy is a disease that affects the retina, can be considered a complication in disease evolution and, if it not detected, can cause serious vision problems. It occurs as a result of damage that high levels of sugar exert on the blood vessels, these can dilate and increase their permeability, producing fumes of their content or they can be partially or totally narrowed, preventing the blood from circulating normally. At first, diabetic retinopathy may have no symptoms or only mild vision problems, but in its evolution, if not properly controlled, it can lead to irreversible vision loss and blindness.

01

Leading cause of blindness in working-age people

· Diabetic retinopathy (DR) is considered in developed countries as the leading cause of blindness in people of working age.



02

170 million affected people, Diabetes mellitus

· Diabetes mellitus (DM) is currently one of the most serious problems facing global public health, in 2000 there were around 170 million affected people on the planet.

03

The projection for the year 2030 is 360 million people.



04

Only 7.6% of diabetics report knowing their condition as a carrier of DR.



05

DR is the most common complication of DM

06

The occurrence of this complication is directly related to the time of evolution and metabolic control of the disease.

07

Other ophthalmological pathologies

· Diabetic retinopathy can occur accompanying other ophthalmological pathologies such as glaucoma, cataracts, presbyopia, among others

08

· Multicenter studies show a general DR prevalence of 35.4%, with 11.7% of these having some degree of vision-threatening DR (proliferative DR or macular edema).

Prevention

Early detection of DR is essential to avoid blindness. The American Diabetes Association and the American Academy of Ophthalmology state that, if the screening guidelines are properly followed and patients are treated promptly, the reduction in the risk of blindness is between 12% and 28%.



Symptoms of diabetic retinopathy



You can have diabetic retinopathy and not know it. This is because it usually has no symptoms in its early stages. As it worsens, you will notice symptoms such as the following:

01

· A greater number of floaters

02

· Blurry vision

03

· Vision that changes from blurry to clear

04

· See blank or dark areas in the field of view

05

· Poor night vision

06

· Notice that colours are dull.

07

· Lose sight



Symptoms of diabetic retinopathy usually affect both eyes.



See Far Solution

New technologies are allowing the development of smart devices and glasses, which will facilitate the adaptation of patients to their work environment, reducing the impact of the symptoms of this disease.

Likewise, the development of algorithms for the diagnosis and progression of the disease will allow greater monitoring and control over the progression of the disease, allowing the establishment of earlier and more effective treatments to fight against blindness.



see far

Bibliography

1. Furtado J, Lonsingh V, Carter M, Milanese M, Peña B, Ghersi H, et al. Causes of blindness and visual impairment in Latin America. *Surv Ophthalmol* 2012; 57 (2): 149-77. [[Links](#)]
2. Wild S, Roglic G, Green A, Sicree R, King H. Global prevalence of diabetes: estimates for the year 2000 and projections for 2030. *Diabetes Care* 2004; 27: 1047-53. [[Links](#)]
3. Chile. Ministry of Health. Results of the National Health Survey, Chile 2009-2010. Santiago: MINSAL, available at: <http://www.redsalud.gov.cl/portal/url/item/99b0b09b99083eb8a04901011014b49.pdf> (accessed July 23, 2016). [[Links](#)]
4. Chile. Ministry of Health. Evaluation of the characteristics and changes in the treatment of diabetes in the general Chilean population. ENS 2003 and ENS 2009-10. Santiago: MINSAL, available at: <http://web.minsal.cl/web/default2/files/files/informecoberturaefectivadibabetes.pdf> (accessed December 23, 2016). [[Links](#)]
5. Klein R, Klein B, Moss S, Cruickshanks K. The Wisconsin Epidemiologic Study of Diabetic Retinopathy: XVII. The 14-year incidence and progression of diabetic retinopathy and associated risk factors in type 1 diabetes. *Ophthalmology* 1998; 105: 1801-15. [[Links](#)]
6. Yau J, Rogers S, Kawasaki R, Lamoureux E, Kowalski J, Bek T, et al. Global prevalence and major risk factors of diabetic retinopathy. *Diabetes Care* 2012; 35 (3): 556-64. [[Links](#)]
7. Barrio F, Martínez F. Diabetic retinopathy clinical practice guide for Latin America, 2012. Available at: <http://www.sagp.cl/web/default2/files/files/informecoberturaefectivadibabetes.pdf> (accessed August 11, 2016). [[Links](#)]
8. Verdaguier J, Vicencia C, Zúñiga C, Molina E. Screening for Diabetic Retinopathy in Latin America (D-Day). Results. *Arch. Chil. Oftal* 2001; 58: 39-43. [[Links](#)]
9. Abazaad S, Guzmán P, Urzúa C. Prevalence of Diabetic Retinopathy and Macular Edema in Diabetic population of CESFAM Cordillera Andina de los Andes. *Chilean Journal of Public Health* 2012; 18 (1): 81-6. [[Links](#)]
10. Echouffo-Touegui J, Ali M, Roglic G, Hayward R, Narayan K. Sensitivity and specificity of photography and direct ophthalmoscopy in screening for sight threatening eye disease: the Liverpool Diabetic Eye Study. *BMJ* 1995; 301 (7013): 1131-5. [[Links](#)]
12. Pielczynski J, Grzybowski A. Review of Diabetic Retinopathy Screening Methods and Programs Adopted in Different Parts of the World. *European Ophthalmic Review* 2015; 9 (1): 49-55. [[Links](#)]