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The diabetic retinopathy menace. Changes observed in eight years follow up of a Spanish population

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Background & Aim: More than 200 million patients have diabetes mellitus (DM), and it is predicted to rise by over 120% worldwide by 2025. The most important ocular complication is diabetic retinopathy [DR], a common cause of blindness in Europe. However, since 2011, we noticed important increases in the incidence of any-DR, especially in younger patients. This study aims to analyse these findings and evaluate the changes in DR risk factors through a population-based study of diabetes mellitus patients referred to our Health Care Areas (HCA).

Method: A prospective, Spanish population-based study of 16 HCA (247,174 inhabitants), was conducted from January 1st, 2007 to December 31st, 2014. 15,396 patients with DM were studied over an 8-year follow up period. Screening for DR was carried out with one 45° field retinography. If DR was suspected, further retinographies were taken, according to previous studies.

Results: The 8-year cumulative incidence [8-year-CI] of any-DR was 24.12%, a yearly mean value of $8.37 \pm 2.19\%$ [8.09%-8.99%]; of advanced-DR 8-year-CI was 4.17%, a yearly mean value of $0.46 \pm 0.22\%$ [0.03-0.78]. The DR incidence remained stable between 2007 [8.09%] and 2011 [8.11%]. Not occurring the same between 2012 (8.77%), 2013 (8.92%) and 2014 (8.99%), were we observe an increase. We noticed this especially in some age groups (for any-DR patients aged 41-50 and 51-60, and for advanced-DR patients aged 41-50, 51-60 and 61-70), which were related to an increase in HbA1c values or to patients treated with insulin.

Conclusions: The increase in incidence of DR over the last three years of our study is startling. We've found a very important increase in young people; most of which is related to bad metabolic control of the diabetes mellitus. If other studies done in different populations confirmed our results, we could expect more complications related to DR.