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Cataract in Patients with Diabetes Mellitus—Incidence Rates in the UK and Risk Factors

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Abstract

Context and aims: *To analyze the diagnosis or extraction of cataracts in patients with or without diabetes focusing on other comorbid conditions, antidiabetic drug use, and diabetes duration.*

Method: *The study population comprised newly diagnosed diabetes patients more than 40 years old from the UK-based Clinical Practice Research Datalink (CPRD) between the years 2000- 2015, and a random sample of the general population matched for age, sex, general practice, and year of diabetes diagnosis. We assessed cataract incidence rates (IRs) and performed a nested case-control analysis in the diabetic cohort to assess potential risk factors for a cataract.*

Results: *Cataract is a condition where the eye's naturally clear lens becomes cloudy, or opaque and light doesn't pass through the lens as it should and isn't properly reflected onto the retina (the light-sensitive tissue lining the back of the eye). As a result, vision becomes cloudy, distorted or blurry. Usually, cataracts are associated with age-related changes in the eye, though other factors, such as medication, surgery, disease play a role in cataract development, sun exposure and also diabetes leads to early cataract formation in younger people as well. Persons with diabetes mellitus have been found to be at increased risk of developing cataracts when compared with nondiabetic persons. There were 56,510 diabetes patients included in the study. IRs of cataract was 20.4 (95% CI 19.8–20.9) per 1000 person-years in patients with diabetes and 10.8 (95% CI 10.5–11.2) per 1000 in the general population. IRs increased considerably around the age of 80 years and with a concomitant diagnosis of macular edema. The incidence rate ratio (IRR) was highest in patients of the age group of 45–54 years. In the nested case-control study, we identified 5800 patients with cataract. Risk of cataract increased with increasing diabetes duration (adj. OR 5.14, 95% CI 4.19–6.30 diabetes for more than years vs. diabetes less than 2 years).*

Conclusions: *According to our study, diabetes is associated with an approximately two-fold increased detection rate of cataract. The risk of cataract associated with diabetes is highest at younger ages. Patients with diabetic macular edema are at an increased risk for cataract as well as patients with long-standing diabetes.*

Keywords: *Cataracts, Diabetes Mellitus.*