Relationship between the severity of retinopathy and progression to photocoagulation in patients with Type 2 diabetes mellitus in the UKPDS (UKPDS 52).

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AIM: to establish the degree to which the severity of retinopathy determines the risk for the need for subsequent photocoagulation in those with newly diagnosed Type 2 diabetes mellitus. METHODS: Of 5102 patients entered into the UK Prospective Diabetes Study (UKPDS), 3709 had good quality retinal photographs that could be graded at entry. They were followed until the end of the study or until lost to follow-up, or until they received photocoagulation. Retinopathy severity was categorized as no retinopathy, microaneurysms (MA) only in one eye, MA in both eyes or more severe retinopathy features. The risk of photocoagulation was assessed in relation to severity of retinopathy at baseline, 3 and 6 years. RESULTS: Of the 3709 patients assessed at entry to the UKPDS, 2316 had no retinopathy. Of these 0.2% needed photocoagulation at 3 years, 1.1% at 6 years and 2.6% at 9 years. Those with MA in one eye only (n = 708) were similar, with 0%, 1.9% and 4.7% needing photocoagulation by 3, 6 and 9 years, respectively. Amongst those who had more retinopathy features at entry (n = 509), 15.3% required photocoagulation by 3 years, and 31.9% by 9 years. When those without retinopathy at 6 years (n = 1579) were examined 3 and 6 years later (9 and 12 years after diagnosis), 0.1% and 1.8% required photocoagulation. Those with more severe retinopathy (n = 775) needed earlier treatment, 6.6% after 3 years and 13.3% after 9 years. The commonest indication for laser therapy was maculopathy, but those with more severe retinopathy were more likely to be treated for proliferative retinopathy and to need both eyes treated. CONCLUSION: Few type 2 diabetic patients without retinopathy progress to photocoagulation in the following 3-6 years, while patients with more severe retinopathy lesions need to be monitored closely.