

Ophthalmic Photographic Diabetic Review (OPDR): a virtual clinic approach for management of referable diabetic maculopathy

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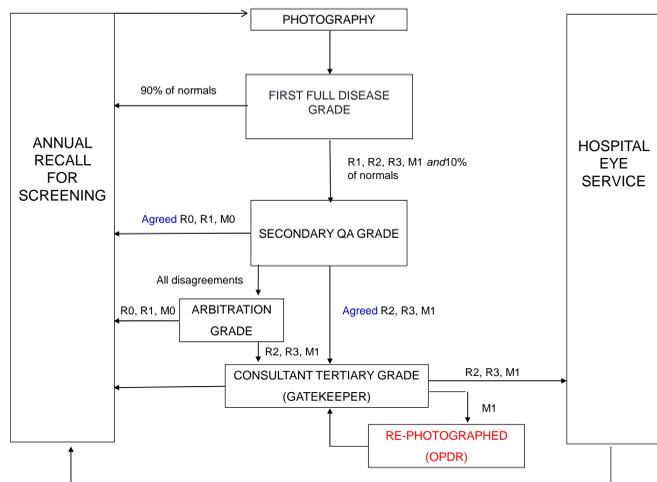
Introduction

- Digital diabetic retinopathy screening has resulted in an increase in referral to hospital eye services (HES) creating capacity problems.
- An additional patient pathway was devised in 2005 and incorporated into the screening software so patients with early maculopathy could be cared for in a virtual clinic.
- In addition other patient groups need more frequent diabetic retinopathy (DR) screening e.g. pregnant women with diabetes and those with anticipated major improvements in glycaemic control.

The purpose of the audit was to determine whether it is safe and cost effective to monitor patients in a virtual clinic?

Methods

Data was collected from patients attending OPDR. Images were captured and graded by an experienced screener and reviewed by an ophthalmologist who decided the clinical outcome; either return to annual screening, continue OPDR (1-9 month interval) or refer to HES.



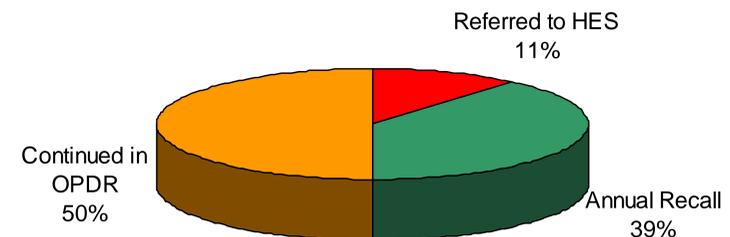
The OPDR pathway and how it is integrated into the screening pathway

Three audits were completed –

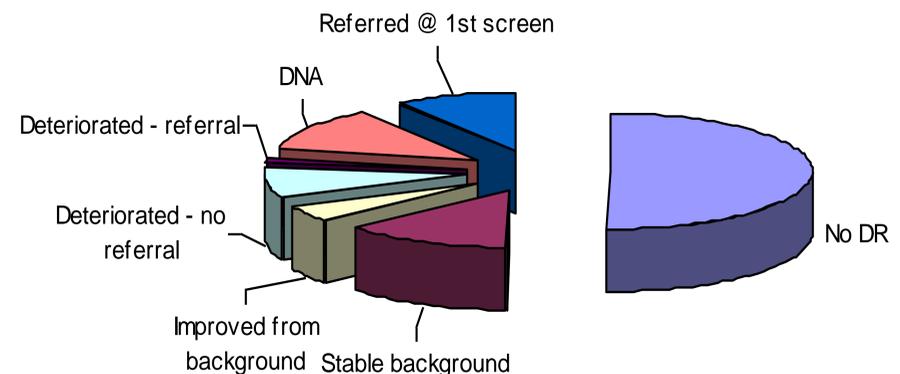
- **OPDR pilot study** - a retrospective analysis of patients referred to OPDR with early referable maculopathy over a six month period in 2006.
- **DR screening in pregnant women with diabetes** - a retrospective analysis of 187 patients attending OPDR for DR screening throughout their pregnancy from 2006 – 2009. A protocol was devised to include a screen in the first and second trimester and further screens according to DR findings.
- **Macular thickness of patients with macular lesions** - a prospective analysis of patients with DR changes in the macula who consented to an additional optical coherence tomography (OCT) examination at time of screening over a maximum of 24 months (2009 - 2011).

Results

OPDR pilot study - 207 patients with maculopathy were referred from annual screening for assessment. 114 (55%) referrals were seen in OPDR rather than HES. OPDR outcomes are seen below:



DR screening in pregnant women with diabetes – only 11% required referral to ophthalmology, avoiding unnecessary outpatient consultations hence saving costs.



Macular thickness of patients with macular lesions

M0 = HMA & VA ≥ 6/9	374 patients 13 (3.5%) thickening on OCT
M1 = HMA & VA ≤ 6/12	80 patients 11 (14%) thickening on OCT
M1 = exudate within 1DD or circinate within macula	155 patients 45 (29%) thickening on OCT
Total M1	235 patients 56 (24%) thickening on OCT

76% of M1 patients who do not show macular oedema on OCT may not need referral to HES, monitoring in OPDR may be more suitable for these patients.

Conclusion

- **OPDR with OCT is a safe and cost effective virtual method of reducing the burden of referrals to HES for early maculopathy.**
- **It also allows an alternative care pathway for special groups of patients who may need to be monitored more frequently.**
- **No patient attending OPDR has presented too late for effective laser treatment or visual loss.**