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Abstract Information

Abstract Title:

The Long-Term Risk of Manifest Glaucoma After Optic Disc Haemorrhages

Purpose:

To investigate the long-term risk of manifest glaucoma in eyes with optic disc haemorrhages (ODH).

Design:

Prospective cohort study.

Participants:

During 1992-1997 we performed a population-based screening of 32,918 elderly Malmö citizens. We identified 262 patients with ODH on fundus photographs; 160 of these did not have manifest glaucoma. Nine (5.6%) developed glaucoma early during follow-up and were included in EMGT. Among the remaining, 116 subjects were born in 1921 or later. We invited those 82 who were still alive, had not moved out of the area or were institutionalized.

Main Outcome Measures:

The main outcome criterion was manifest glaucoma as demonstrated by repeatable visual field defects on standard perimetry, that were deemed glaucomatous when the results of all examinations (below) were combined.

Methods:

Patient examinations included ophthalmoscopy, fundus photography, SAP, FDT, SWAP, HRT and OCT in the eye with ODH at screening.

Results:

64 patients came for examination. Nine patients were not analyzed, five since they did not complete the study or because of eye disease that made it impossible to determine whether there was glaucoma damage, and three because repeat photography showed that they had not had an ODH at the screening. Mean age was 77 (range 67 – 83); mean time since screening was 9.3 years (range 7.5 – 11.3). Twenty of the patients (36.4%) had manifest glaucoma in the study eye.

Thus a total of  $36.4 + 5.6\% = 42\%$  of the study eyes developed manifest glaucoma. All diagnostic methods showed sensitivities and specificities that were less than perfect, and the results did not support the common belief that glaucoma is first evident on examination of the RNFL, then in the optic disc topography, followed by SWAP and SAP.

Conclusion:

Eyes with optic disc haemorrhages but no field defects have a moderately high risk of developing visual field defects over a 10-year period. Visual function testing or structural measurements may indicate damage first.