



SCREENING FOR GLAUCOMA IN A GENERAL POPULATION WITH THE NON MYDRIATIC FUNDUS CAMERA

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Purpose: To evaluate the efficacy of the Non-Mydriatic Fundus camera (NMFu-camera) and the Frequency Doubling Perimeter (FDP) for detecting glaucoma in a general population.

Design: Population based cross-sectional study

Participants: 1620 subjects were included in the study, recruited from the population of 3 Belgian cities via advertisement in newspapers and TV to present for glaucoma screening.

Main Outcome Measure: Newly recognized glaucoma

Testing: Intraocular pressure (IOP) was measured with the non-contact pneumotonometer (NCT) followed by an applanation tonometry (AT) if the NCT-IOP was > 17 mm Hg. The visual field was screened with the FDP (C-20-5) and digitalized optic disc photographs (ODP's) were taken with the NMFu-camera. FDP was considered abnormal if at least one defective point was found ($P < 5\%$). The ODP's were graded as normal or glaucomatous by consensus of three glaucoma specialists. Treated patients were excluded from the analysis.

Results: The mean age was 63.2 ± 10.7 years. 8.2% had an AT-IOP > 21 mm Hg. 98.1 % of the ODP's could be interpreted. Glaucomatous optic discs were detected in 3.5% of the subjects. In this group only 24% had an AT-IOP > 22 mm Hg. FDP was abnormal in 32% of the subjects. The sensitivity and specificity of FDP to identify patients with an optic disc graded as glaucomatous were 58,6% and 64,3% respectively.

Conclusion: The NMFu-camera is a useful method to screen for glaucomatous optic disc damage.