A COMMUNITY-BASED SCREENING CAMPAIGN FOR THE DETECTION OF DIABETES MELLITUS COMPLICATIONS USING DIABETIC RETINOPATHY AS BIOMARKER

In order to increase awareness and early detection of diabetes complications, the Mutirão do Diabetes in Blumenau - SC was created, along the lines of the task force conceived by the Federal University of São Paulo, Escola Paulista de Medicina, 20 years ago. This project came to describe a mass screening campaign for the detection of diabetes complications using diabetic retinopathy (DR) as a biomarker.

Patients were recruited from community with previous diagnostic of diabetes. All patients underwent a series of exams which started with fundoscopy for diabetic retinopathy detection, then diabetic feet exam. Patients were classified according to ETDRS classification and if they had severe or worse DR they were also evaluated for diabetic nephropathy using proteinuria as reference. All patients with proliferative disease were referenced for laser photocoagulation. After diabetic feet exam, patients with low sensibility using 10g monofilament test were avaluated for diabetic footwear adaption. If distal pulse were absent or in presence of ulcer/amputation they were examined by the vascular surgeon at the event and referenced if necessary.

The campaign occurred in a single day in November in 2018 and 2019, allusive to the World Diabetes Day. A total of 568 diabetic patients were examined. The mean age was 60.1 years old, 55.93% female and 44.07% male. The majority of patients had type 2 diabetes (94.8%). The mean time of diabetes was 11.52 years. For 48.27% this was the first time they had dilated indirect ophthalmoscopy performed and for 69.96% the first time they had detailed feet examination. Regarding diabetic retinopathy 85.77% had normal eye exam, 9.55% had moderate or better, and 4.68% had severe or worse diabetic retinopathy. A total of 16 eyes had diabetic macular edema (DME). Two patients were diagnosed with traction retinal detachment and 6 with vitreous hemorrhage which were referred for vitreoretinal surgery. 152 patients were newly diagnosed with low feet sensibility and referred for specific footwear adaption. Thirty-eight patients were submitted to proteinuria test and blood pressure, 63.89% were positive and referred for complete nephrological exam.

The campaign was able to detect and treat patients with diabetic complications in a single day in an effective manner. This model give access for people that don’t have the opportunity to perform specialized screening tests in the public health system. Finally, in long term, severe complications could be reduced, such as blindness, amputation and renal failure due to diabetes.