ST JOHN EYE HOSPITAL GROUP DIABETIC RETINOPATHY SCREENING PROGRAM IN THE WEST BANK

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BACKGROUND AND AIM

Background: The prevalence of Diabetes mellitus (DM) in Palestine is projected to be 21% in 2020 and 23% in 2030. This is amongst the highest in the world.

In 2008, diabetic retinopathy (DR) was the third-leading cause of blindness (8% of cases) and the second-leading cause of severe visual impairment (14% of cases) among Palestinians aged 50 years and over. A 2012 study found that 37% DM patients (n=376) in the city of Ramallah, in the West Bank, had some form of DR. One third of patients who participated in this study had never had their eyes examined.

St. John Eye Hospital Group (SJEHG) is the only charitable provider of expert eye care in Palestine. It is composed of three hospitals (located in Jerusalem, Hebron, and Gaza) and two clinics (in Anabta and in the old city in Jerusalem).

Aim: The aim of the diabetic retinopathy screening (DRS) program was to reduce blindness and visual impairment among DM patients in the West Bank through early detection and timely management of DR.

METHODS

The DRS program was implemented in 39 clinics in the West Bank (17 United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) clinics, 11 ministry of health (MoH) clinics, 6 non-governmental organizations (NGOs), 3 SJEHG facilities, and one private clinic). It was implemented between November 2012 and July 2015.

The project was approved by Human Research Ethics Committees at SJEHG, MoH, UNRWA and NGOs. Oral consent was obtained from patients and their guardians (for minors).

All consenting DM patients were screened in their respective clinics. Screening was done by a trained nurse using a non-mydratic digital retinal camera (Canon CX-1) or by an ophthalmologist using a slit lamp. If detected, DR was classified according to the International Clinical Diabetic Retinopathy Disease Severity Scale.

RESULTS

- 36,796 DM patients (12,179 males and 24,617 females) were screened for DR. The mean age of patients with type1 DM (DM1) and type 2 DM (DM2) was 25 years (SD 12) and 59 years (SD 11), respectively. Mean duration of DM1 and DM2 was 11 years (SD 9) and 9 years (SD 7), respectively.
- DM1 constituted 4% of the sample. Only 22% of patients had controlled DM (HbA1c<7%). Two thirds (65%) had hypertension.

RESULTS (Continued)

- The prevalence of DR was found to be 32% (35% among men and 30% among women). Half of those with DR had a mild form of the disease (with or without maculopathy).
- No difference in the prevalence of DR was found between participants attending clinics managed by different entities.
- DR cases and other cases that required further care were referred to SJEHG facilities. In total, 12,155 cases were referred.
- 7,381 cases presented for follow up.
- Fluorescein fundus angiography, optical coherence tomography, and visual field assessment were performed for 1,854, 1,319 and 23 patients, respectively.
- 2,390 patients received laser treatment, 955 received anti-VEGF injections (Avastin), and 317 patients underwent surgery to remove cataracts (phaco).

CONCLUSIONS

Two thirds of participants had both DM and hypertension and only 22% were adequately managing DM. One third (32%) had DR.

One in ten participants (9.9%) received eye treatment. The true prevalence of those needing treatment is likely higher, as only 60.7% of those referred presented at follow up.

Timely management of DR (screening and treatment) should be part of a comprehensive national health plan.

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