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Aims and Objectives

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Introduction

This is an epidemiological and clinical study of the causes and patterns of childhood onset visual impairment and blindness in the West Bank and Gaza Strip which was carried out between autumn 1985 and September 1987.

Hypothesis

Studies on the causes of childhood blindness in the Arab world have shown a shift in the pattern of blindness from acquired childhood conditions, to genetic causation, as a result of the high rate of consanguinity in these communities. (1), (2), (3), (4) The same marriage pattern was documented in the Palestinian population (5), (6) and therefore the probability of the same pattern being mirrored in the Palestinian population of the West Bank and Gaza Strip was very high, especially given the high frequency of blind children seen by the author at SJOH after commencing work in 1985.

Why do it?

The burden of childhood blindness is enormous; data on the prevalence was scarce at that time not only in the region but worldwide. (1), (2), (3), (4), (7), (8), (9) The available information on prevalence and precise epidemiology of clinical conditions in the region was, and remains, scarce.

Is it important?

The importance of such information, which was emphasised by the WHO, (10), (11) and the feasibility of obtaining valuable data from this geographically confined population, was an incentive to conduct such a detailed study. The political predicament of the population in question and the lack of any body to evaluate health risks, together with the absence of any blind registration, made it essential to initiate such an epidemiological survey. This was to be followed by a programme for the prevention of childhood blindness and a system to help social services and schools in evaluating the size of the problem and the means with which to help these children.

Objectives

Objectives of the study were both epidemiological and genetic:-

Epidemiological Objectives

(a) To establish the causes and prevalence of childhood blindness in the population defined and compare the data with other countries in the region where similar customs exist (such as Saudi Arabia, Jordan and Lebanon), with different countries with highly inbred communities and other economically established countries.

(b) To establish from the results any trends in the causes or incidence of blindness in this particular population and compare it with other published work.

(c) To establish the prevalence and degree of consanguineous marriages in the population studied, any regional differences existing between the WB and GS,

the refugee population and the indigenous residents of towns and villages. Also to examine the hereditary and non hereditary causes in order to analyse their effects in inherited visual disorders and to compare them with other studies in the Middle-East.

(d) To provide recommendations for possible measures to eradicate childhood blindness in the population defined.

Clinical / Genetic

(a) To document, through analysing the hereditary disorders noted, the clinical patterns and the natural history of important conditions encountered and, in particular, the retinal dystrophies. This is especially the case where several genetic associations co-exist.

(b) To study the phenotypes in order to demonstrate the intrafamilial and interfamilial variability of gene expression and to corroborate the hypothesis that some of these phenotypes are the result of variable expressions of the same genetic defect, or of the same disorder at different stages of their natural history rather than the result of heterogeneity.

(c) This work, with its detailed genealogy, represents valuable material both for the ophthal-mologist and molecular biologist addressing recessive genetic disorders, especially as such detailed genealogies are not normally available in the Western population.

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