Abstract: PB2519

Title: THE EFFECT OF PREVENTIVE HEALTH PROGRAM ON KNOWLEDGE AND SCREENING OF SICKLE CELL DISEASE AMONG HIGH SCHOOL AGED GROUP – THE SAUDI ARABIA EXPERIENCE

Abstract Type: Publication Only

Session Title: Sickle cell disease

Background:

Sickle Cell Disease (SCD) is the commonest inherited red blood cell disorder worldwide. Saudi Arabia has a very uneven distribution of SCD with high prevalence in AlHassa, Eastern and Southwest regions. To lower the prevalence of SCD, the Saudi Ministry of Health (MOH) launched a premarital countrywide screening program for the disease in 2004[3]. Previous research in Saudi Arabia have shown that the population is not well informed on the genetic nature of SCD[1,2], as a result, SCD can be avoided by educating younger people earlier in life about the condition. Individual knowledge about disease/carrier status early could help making informed decisions pre marriage time through structuring screening and educational programs for high school-aged individuals

Aims:

Premarital Screening and Genetic Counseling (PMSGC) knowledge[4], beliefs, and behaviors for a sample of Saudi male students aged between 15 and 18 was assessed and evaluated. The study highlighted the risks associated with consanguineous marriage for sickle disease and Beta thalassemia, which encouraged healthy decision-making after receiving the test results earlier in li

Methods:

Screening by point-of-care (POC) methodology and questionnaire survey was conducted gauged towards secondary school students to assess disease/carrier status and to assess knowledge and attitudes towards SCD, Sickle cell trait and Beta thalassemia carrier status.

In parallel to POC screening tests, the study was conducted among secondary school students in Al Hassa region in Saudi Arabia to determine the impact of various educational and socioeconomic factors on the level of knowledge.

Results:

A sample of 1030 secondary school students participated in this descriptive cross-sectional study from 7 high schools in AlHassa region. Data were gathered using a self-administered questionnaire and POC testing. Data were collected and analyzed.

All participants were males aged between 15 and 18 years old. Sickle cell disease, Sickle cell trait, and Beta thalassemia trait prevalence rates were 4 (0.3%), 158 (15%), and 33 (3%) respectively.

A total of 457 students (44.37%) knew about SCD and Beta thalassemia screening through the national PMSGC, while 572 students (55.53%) were not (one student have autism was not counted).

A total of 865 students (83.98%) believe that the test should be administered during high school, while 121 students (11.75%) disagree. Additionally, 27 students (2.6%) either didn't respond or wrote, "I don't know," and 17 students (1.6%) requested the test to be administered before high school.

A total of 602 students (58.4%) did not know whether they were carriers of inherited red blood disorders or not. 396 students (38.45%) answered "no" and 32 students (3.1%) knew whether they were sickle cell carriers or diseased.

A total of 546 (53%) of those surveyed said they knew nothing about SCD, while 478 (46.4%) had some knowledge of the condition. 6 students (0.6%) chose not to respond to it. Consanguinity between students' parents was found to be 47.37% in this survey.

Summary/Conclusion:

The attitude and knowledge toward SCD were generally acceptable among high school students in Al Hassa region. The study demonstrated good behavior towards pre-marital decision-making that was indicative of a deeper knowledge of the burden of SCD. The majority of students were aware of SCD prevention, and when SCD status was known, improved attitudes were more likely. Consequently, a regular screening program for high school students and counseling services may be able to help control SCD occurrence before marriage. Combining preventative health education programs with SCD control measures can significantly improve SCD management and lower budgetary outlays for curative and therapeutic options.

Keywords: Sickle cell disease, Screening, Red blood cell, Prevention