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Increased knowledge of thalassemia promotes early carrier status examination among medical students

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ABSTRACT

BACKGROUND

Thalassemia is an autosomal recessive genetic disorder, in which the patient requires life-long blood transfusion. As Indonesia harbors 6 to 10% thalassemia carriers, thalassemia prevention measures such as early screening and education in the community are urgently needed. The aim of this study was to explore the knowledge, attitude and practice about thalassemia among young medical students.

METHODS

A cross-sectional analytic observational study was conducted on 179 subjects in 2015, using a questionnaire with items on knowledge, attitude and practice about thalassemia for data collection. After signing informed consent, the questionnaire was filled in by the students and a blood test was performed when the students agreed to be examined. Detection of probable thalassemia carrier status was done by determination of hemoglobin, mean corpuscular volume and mean corpuscular hemoglobin.

RESULTS

The knowledge about thalassemia of the first year medical students (n=179) was good (21.1%), moderate (70.9%) and poor (21.1%). Only 67 (38.3%) of the students agreed to a blood examination for determination of their carrier status after filling-in the questionnaire. The knowledge of thalassemia among first year medical students was statistically related to the timing when they would agree to have their thalassemia carrier status examined (p=0.021, one way ANOVA test).

CONCLUSION

A higher thalassemia knowledge score causes medical students to be willing to undergo thalassemia carrier status examination at an earlier point in timing. A well-organized educational program focusing on thalassemia and early screening in young adults may enhance the thalassemia prevention program.

Keywords: Early detection, knowledge, thalassemia, carrier status, medical students

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Pengetahuan thalassemia yang lebih baik berdampak pada pemeriksaan dini status karir thalessemia mahasiswa kedokteran

ABSTRAK

LATAR BELAKANG

Thalassemia merupakan kelainan autosomal resesif yang penderitanya membutuhkan transfusi darah sepanjang hidupnya. Di Indonesia terdapat 6 sampai 10% penduduk dengan karir thalassemia, sehingga tindakan pencegahan penyakit thalassemia seperti deteksi dini terhadap karir dan edukasi pada masyarakat mengenai beban penyakit thalassemia sangat diperlukan. Tujuan studi ini adalah untuk mendalami pengetahuan, sikap dan perilaku mengenai thalassemia pada mahasiswa kedokteran.

METODA

Penelitian potong lintang studi analitik observasional yang dilakukan pada 179 subjek pada tahun 2015. Kuesioner yang meliputi pertanyaan mengenai pengetahuan, sikap dan perilaku tentang thalassemia digunakan untuk pengumpulan data. Setelah mendatangani surat pernyataan persetujuan penelitian, mahasiswa mengisi kuesioner dan diperiksa darahnya bila berkenan. Deteksi untuk kemungkinan awal status karir thalassemia dilakukan dengan memeriksa nilai hemoglobin (Hb), mean corpuscular volume (MCV) dan mean cospuscular hemoglobin (MCH).

HASIL

Pengetahuan mahasiswa kedokteran tingkat pertama (n=179) mengenai thalassemia dapat dikategorikan baik (21,1%), sedang (70,9%) dan buruk (21,1%). Hanya 67 (38.3%) mahasiswa yang setuju untuk dilakukan pemeriksaan darah dalam menentukan status karir thalassemianya setelah pengisian kuesioner. Pengetahuan thalassemia diantara mahasiswa fakultas kedokteran ini secara statistik berelasi dengan waktu mereka mau diperiksa status karir thalassemianya (p=0,021, oneway ANOVA test).

KESIMPULAN

Nilai pengetahuan thalassemia yang lebih baik membuat mahasiswa kedokteran melakukan pemeriksaaan status karir thalasemianya lebih awal. Program edukasi yang organisasinya baik dan berfokus kepada thalassemia serta deteksi dini status karir thalassemia pada dewasa muda dapat meningkatkan program pencegahan penyakit thalassemia.

Kata kunci: *Deteksi dini, pengetahuan, status karir thalassemia, mahasiswa kedokteran*

INTRODUCTION

Thalassemia, an autosomal recessive genetic disorder involving hemoglobin (Hb) chain synthesis, is prevalent among populations in Mediterranean, Middle Eastern, South Asian and South East Asian countries.[1-4] The disease is not curable and the patients require life-long blood transfusion; however, new technologies offer the possibility for bone marrow transplantation.[5] Due to life-long blood transfusion, thalassemia patients may have complications of iron overload leading to abnormalities associated with iron deposition in tissues, ultimately resulting in death, thus necessitating iron chelation therapy.[6] Infants with thalassemia major are born from parents who both harbor heterozygous mutations or are carriers, therefore their probability of having a child with thalassemia is one out of four pregnancies.