ABSTRAK

Latar Belakang: Berdasarkan penyebabnya, hipertensi dibedakan menjadi sekunder dan primer. Hipertensi sekunder disebabkan oleh kondisi medis lain, salah satunya hipertiroid. Subjek penelitian ini direkrut dari Balai Penelitian dan Pengembangan Kesehatan Magelang. Kabupaten Magelang pernah menjadi daerah endemik kekurangan iodium. Hipertensi primer berhubungan dengan variasi genetik, seperti variasi gen GSTT1(*Glutathione S-Transferase Theta 1).* Penelitian ini bertujuan mengetahui hubungan GSTT1 *null genotype* dengan kejadian hipertensi pada pasien hipertiroid.
Metode: Metode *case-control* membagi 121 subjek penelitian dalam dua kelompok, yaitu hipertensi dan normotensi. Kemudian dilakukan *Polymerase Chain Reaction* dan elektroforesis pada sampel DNA partisipan untuk melihat frekuensi variasi gen GSTT1. Uji statistik yang dipilih menggunakan *Chi-square* (x^2).
Hasil: Mayoritas subjek berjenis kelamin wanita (87,6%) dan berada di rentang usia 30-39 tahun (30,58%). Tidak terdapat perbedaan proporsi antara kelompok *null* dan *wild* pada berbagai kelompok usia, jenis kelamin dan tekanan darah (P=0,472; P=0,906; P=0,655). Frekuensi subjek yang memiliki GSTT1 *null genotype* adalah 12,40%. Menurut penelitian ini, hubungan GSTT1 *null genotype* dengan kejadian hipertensi pada pasien hipertiroid tidaklah signifikan secara statistik (P=0,655, OR= 1,280**).**
Kesimpulan: Tidak terdapat hubungan antara GSTT1 *null genotype* dengan kejadian hipertensi pada pasien hipertiroid di Balai Penelitian dan Pengembangan Kesehatan Magelang.

Kata kunci : GSTT1, delesi, variasi genetik, hipertensi, hipertiroid

ABSTRACT

Background: Based on its causes, hypertension is classified into secondary and primary hypertension. Secondary hypertension is caused by other medical conditions, one of which is hyperthyroidism. The subjects of this study were recruited from the Health Research and Development Center in Magelang. Magelang Regency has previously been an endemic area for iodine deficiency. Primary hypertension is associated with genetic variations, such as the GSTT1 (Glutathione S-Transferase Theta 1) gene variation. This research aims to determine the relationship between the GSTT1 null genotype and the occurence of hypertension in hyperthyroid patients.
Method: The case-control method divided 121 research subjects into two groups, namely hypertension and normotension. Polymerase Chain Reaction and electrophoresis were then performed on the participants' DNA samples to assess the frequency of the GSTT1 gene variation. The chosen statistical test used Chi-square (x^2).
Results: The majority of the subjects were female (87,6%) and in the age range of 30-39 years (30,58%). There were no differences in proportions between the null and wild groups in various age groups, genders, and blood pressure levels (P=0,472; P=0,906; P=0,655). The frequency of subjects with the GSTT1 null genotype was 12,40%. According to this study, the relationship between the GSTT1 null genotype and the occurence of hypertension in hyperthyroid patients is not statistically significant (P=0,6555; OR=1,280).
Conclusion: There is no association between the GSTT1 null genotype and the occurance of hypertension in hyperthyroid patients at the Healh Research and Development Center in Magelang.

Key words: GSTT1, deletion, genetic variations, hypertension, hyperthyroid