

## **Association of Transforming Growth Factor- $\beta$ 1 Gene 1800469 C > T and 1982073 C > T Polymorphism with Type 2 Diabetic Foot Ulcer Patient in Cipto Mangunkusumo National Hospital Jakarta**

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**Abstract :** Objective: Diabetic Foot Ulcer (DFU) is one of the complications of Type 2 Diabetes Mellitus (T2DM) that can lead to disability and death. Inadequate vascularization condition will affect healing process of DFU. Therefore, we investigated the expression of polymorphism TGF-  $\beta$ 1 in the relation of the occurrence of DFU in T2DM. Methods: We designed a case-control study to investigate the polymorphism TGF-  $\beta$ 1 gene 1800469 C > T and 1982073 C > T in T2DM in Cipto Mangunkusumo National Hospital (RSCM) Jakarta from June to December 2016. We used PCR techniques and compared the results in a group of T2DM patients with DFU as the case study and without DFU as the control group. Results: There were 203 patients, 102 patients with DFU and 101 patients control without DFU. 49,8% is male and 50,2% female with mean age about 56 years. Distribution of wild-type genotype TGF-B1 1800469 C > T wild type CC was found in 44,8%, the number of mutant heterozygote CT was 10,8% and mutant homozygote is 11,3%. Distribution of TGF-B1 1982073 C>T wild type CC was 32,5%, mutant heterozygote is 38,9% and mutant homozygote 25,1%. Conclusion: Distribution of alleles from TGF-B1 1800469 C > T is C 75% and T 25% and from TGF-B1 1982073 C > T is C 53,8% and T 46,2%. In the other word polymorphism TGF-  $\beta$ 1 plays a role in the occurrence and healing process of the DFU in T2DM patients.

**Keywords :** diabetic foot ulcers, diabetes mellitus, polymorphism, TGF- $\beta$ 1

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