



TITLE: Correlation of Metabolic Syndrome with Genu Osteoarthritis in Type 2 Diabetes Mellitus

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ABSTRACT

Introduction: Genu osteoarthritis is a joint disorder due to a gradual decrease cohesiveness in cartilage of the genu. The definition of metabolic syndrome based on the International Diabetes Federation (IDF) in 2006 was central obesity plus two of the following four factors (hyperglycemia, hypertension, low LDL cholesterol level, and hypertriglyceridemia). This study aims to determine the relationship between metabolic syndrome and the incidence of osteoarthritis genu in type 2 DM patients at RSI Jemursari Surabaya. **Methods:** This study uses an analytic observational method with a cross-sectional design. The population of this study is type 2 DM patients and samples were obtained according to the inclusion and exclusion criteria. The inclusion criteria were DMT2 outpatients at the Department of Internal Medicine, RSI Jemursari Surabaya in 2019, aged 36-70 years. On the other hand, the exclusion criteria consisted of patients with knee trauma history, or knee joint arthroplasty history. With using simple random sampling technique, there were 98 samples.

Result: The characteristics of the samples are as followed: the frequency of the metabolic syndrome in DM type 2 patients is 31.6% with hypertension, type 2 diabetes, hypertriglyceridemia as the components of the syndrome (83.9%). On the other hand, we found that the frequency of Genu Osteoarthritis in our sample is 28.6%. Majority of patients is suffering from bilateral Genu Osteoarthritis (60.7%). Furthermore, we found that 4% of the samples were suffering from either Osteoarthritis Genu or Metabolic Syndrome. The Chi-Square test showed that there were no significant relationship between metabolic syndrome and genu osteoarthritis in type 2 Diabetes Mellitus (p -value > 0,05).

Conclusion: There is no significant correlation between metabolic syndrome and genu osteoarthritis in type 2 Diabetes Mellitus

Keyword: Metabolic syndrome, Genu Osteoarthritis, DM type 2



BIOGRAPHY (upto 200 words)

Diaz Syafrie Abdillah has completed his Medical Doctor at the age of 25 years from Medical faculty of Universitas Nahdlatul Ulama Surabaya, Indonesia. He is a general practitioner at Koesma General Hospital Tuban, Indonesia. He is also a research assistant in Neurosurgery Department at Soetomo General Hospital Surabaya, Indonesia. He is active in publishing reputable journals since 2018, of which are Scopus indexed.

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