

**PENGARUH USIA, INDEKS MASSA TUBUH, DAN JENIS KELAMIN
DENGAN DERAJAT PROTUSIO HERNIA NUKLEUS PULPOSUS
LUMBAL BERDASARKAN GAMBARAN MRI DI RSPAD GATOT
SOEBROTO TAHUN 2020-2022**

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ABSTRAK

Nyeri Punggung Bawah (NPB) merupakan rasa nyeri yang terjadi di area vertebra bagian bawah yang dapat timbul secara lokal, radikuler atau keduanya. 40% kasus NPB terjadi karena hernia nukleus pulposus (HNP), lokasi yang paling sering terkena adalah vertebra L4-L5. Beberapa faktor yang diduga menjadi penyebab HNP lumbal, diantaranya usia, IMT, dan jenis kelamin. Diagnostik *magnetic resonance imaging* (MRI) digunakan untuk mengukur derajat protrusio hernia nukleus pulposus lumbal. Penelitian dilakukan dengan tujuan untuk mengetahui variabel yang paling berpengaruh terhadap derajat HNP lumbal di RSPAD Gatot Soebroto Jakarta. **Metodologi:** Studi analitik cross-sectional dengan pasien terdiagnosis HNP lumbal yang didiagnosis dengan MRI yang termasuk dalam kriteria inklusi pada tahun 2020-2022 di RSPAD Gatot Soebroto Jakarta. **Hasil:** Pasien HNP lumbal berjumlah 129 orang, dengan mayoritas kelompok umur adalah Lansia (46-65 tahun), 47,3% (n=61), kelompok BMI tertinggi adalah obesitas I, 51,2% (n=66), populasi didominasi perempuan, 44,2% (n=72). pasien 45,7% (n=59) mengalami *bulging* dan 54,3% (n=70) mengalami protrusio yang didiagnosis dengan MRI. Didapatkan hubungan signifikan antara umur, indeks massa tubuh, dan jenis kelamin dengan derajat protrusio HNP lumbal (p 0,004; 0,000; 0,001). Hasil analisis regresi logistik variabel IMT berpengaruh paling kuat terhadap derajat protrusio dengan nilai p-value 0,000 (p<0,05) dan odds ratio (OR=4,527). **Kesimpulan:** indeks massa tubuh adalah faktor yang paling berpengaruh terhadap derajat protrusio pada pasien HNP lumbal di RSPAD Gatot Soebroto tahun 2020-2022 dengan p-value 0,000 (p<0,05) dengan nilai odds ratio (OR= 4,527) yang menunjukkan risiko 4,527 kali lipat pada derajat penonjolan dibandingkan dengan variabel independen lainnya

Kata Kunci: Usia, Indeks Massa Tubuh, Jenis Kelamin, Derajat Protrusio, HNP Lumbal

**THE EFFECT OF AGE, BODY MASS INDEX, AND GENDER TO
PROTRUSION DEGREE LUMBAR HERNIATED NUCLEUS PULPOSUS
BASED ON MRI IMAGING AT PRESIDENTIAL HOSPITAL RSPAD
GATOT SOEBROTO FOR THE PERIOD OF 2020-2022**

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ABSTRACT

*Pain in the lower back region, known as low back pain (LBP), can manifest as either localized, radicular, or a combination of both.. 40% of cases of lower back pain occur due to lumbar herniated nucleus pulposus where the most commonly affected site is the L4-L5 vertebral level. Several factors are thought to be the cause of lumbar HNP, including age, body mass index and gender. One of the diagnostic modalities used in patients with magnetic resonance imaging (MRI), which can measure degree of protrusion lumbar herniated nucleus pulposus. The aim of this study was to determine the variables that most effect the degree of protrusion lumbar HNP at RSPAD Gatot Soebroto Jakarta. **Methodology:** Analytical cross-sectional study involving patients diagnosed with lumbar herniated nucleus pulposus which diagnosed with MRI in 2020-2022 at RSPAD Gatot Soebroto Jakarta who met the inclusion criteria. **Results:** There were total of 129 lumbar HNP patients, with majority being age group was middle-aged adults (46-65 years), 47.3% (n=61), the highest BMI group was obese I, 51.2 % (n=66), population is predominantly female, 44.2% (n=72). patients 45.7% (n=59) had bulging while 54.3%(n=70) had protrusion diagnosed by MRI. there is a significant relationship between age and protrusion degree with p-value 0.004 ($p < 0.05$). there is a significant relationship between body mass index and protrusion degree shows p-value 0.000 ($p < 0.05$). There is a significant relationship between gender and protrusion degree with p-value 0.001 ($p < 0.05$). Result of the logistic regression analysis that body mass index variable had the strongest effect on the protrusion degree with a p-value of 0.000 ($p < 0.05$) and OR (odds ratio) =4.527, each one-step increases in body mass index led to 4.527-fold increases odds for protrusion degree of lumbar herniated nucleus pulposus. **Conclusion:** the factor that has the strongest effect on the protrusion degree is body mass index in lumbar HNP patients at the Gatot Soebroto Army Hospital in 2020-2022 with a p-value of 0.000 ($p < 0.05$) with an OR value = 4.527 which indicates a 4.527-fold risk on the protrusion degree compared with other independent variables*

Keywords: Age, Body Mass Index, Gender, Protrusion Degree, Lumbar Herniated Nucleus Pulposus