

KORELASI DIAMETER MIDSAGITAL CANALIS CERVICAL RADIOGRAFI LATERAL DENGAN DERAJAT STENOSIS CANALIS SPINALIS PADA MRI PASIEN *CERVICAL SPONDYLOSIS MYELOPATHY*

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INTISARI

Latar Belakang: *Cervical spondylosis myelopathy (CSM)* merupakan sindrom klinis sekunder akibat penekanan *medulla spinalis* oleh karena perubahan degeneratif yang dapat menimbulkan gangguan neurologis dan disabilitas jangka panjang. Angka kejadian CSM semakin meningkat seiring dengan pertambahan usia. Pengukuran diameter midsagital cervical merupakan salah satu metode dalam menilai stenosis canalis spinalis pada radiografi lateral cervical. MRI adalah modalitas baku emas dalam menilai kejadian dan menentukan derajat stenosis canalis spinalis yang bermanfaat dalam manajemen terapi. Namun ketersediaan MRI masih terbatas, sehingga diperlukan alat skrining awal dalam menilai kejadian dan derajat stenosis canalis spinalis pada CSM

Tujuan: Untuk mengetahui adanya korelasi antara diameter midsagital cervical terhadap derajat stenosis canalis spinalis pada cervical

Metode: Penelitian ini merupakan jenis penelitian uji observasional analitik dengan desain penelitian *cross sectional*. Pengambilan data dilakukan secara retrospektif dari data sekunder pasien dengan klinis CSM yang dilakukan pemeriksaan radiografi lateral cervical dan MRI cervical di Instalasi Radiologi RSUP Dr. Sardjito Yogyakarta pada bulan Januari 2018 sampai Desember 2022. Pengambilan sampel dilakukan secara *consecutive non-random sampling*. Subjek terpilih sesuai dengan kriteria inklusi dan eksklusi

Hasil: Jumlah sampel 50 subjek, dengan predominan jenis kelamin laki – laki yaitu 27 subjek (54%). Rerata usia subjek adalah 55,4 tahun. Hasil uji korelasi didapatkan nilai $p = 0,001$ ($p < 0,005$) dan $r = -0,869$ yang menunjukkan korelasi negatif yang signifikan antara rasio diameter midsagital cervical dan derajat stenosis canalis spinalis.

Kesimpulan: Semakin kecil diameter midsagital canalis spinalis seiring dengan semakin besarnya derajat stenosis canalis spinalis dengan koefisien korelasi yang kuat secara statistik.

Kata kunci: diameter midsagital cervicalis, stenosis canalis spinalis cervical, *cervical spondylosis myelopathy*, MRI, X-ray

CORRELATION BETWEEN MIDSAGITTAL DIAMETER AND THE DEGREE OF SPINAL CANAL STENOSIS IN PATIENT CERVICAL SPONDYLOSIS MYELOPATHY

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ABSTRACT

Background: Cervical spondylosis myelopathy (CSM) is a secondary clinical syndrome caused by spinal cord compression due to degenerative changes, which can lead to neurological impairments and long-term disabilities. The incidence of CSM increases with age. Measurement of the mid-sagittal cervical diameter is one of the methods used to assess spinal canal stenosis on lateral cervical radiographs. MRI is considered the gold standard modality for evaluating the occurrence and determining the degree of spinal canal stenosis, which is beneficial for therapeutic management. However, the availability of MRI is limited, so there is a need for an initial screening tool to assess the occurrence and degree of spinal canal stenosis in CSM.

Purpose: This study aims to determine the correlation between mid-sagittal diameter of the cervical radiograph ratio and the degree of cervical spinal canal stenosis

Methods: This research is a comparative analytic test with a cross-sectional design. Data collection was carried out retrospectively from secondary data of patients with clinical CSM who underwent cervical lateral radiography and cervical MRI examinations at the Radiology Installation of RSUP Dr. Sardjito Yogyakarta from January 2018 to December 2022. Sampling was carried out using consecutive non-random sampling. Subjects were selected according to the inclusion and exclusion criteria

Results: The sample size consisted of 50 subjects, with a predominance of male subjects, accounting for 27 subjects (54%). The average age of the subjects was 55.4 years. The correlation test resulted in a p-value of 0.001 ($p < 0.005$) and an r-value of -0.869, indicating a significant negative correlation between the mid-sagittal diameter of the cervical radiograph and the degree of spinal canal stenosis.

Conclusion: The smaller the mid-sagittal diameter of the spinal canal, the greater the degree of spinal canal stenosis, and there is a strong statistically significant correlation between them.

Keywords: mid-sagittal diameter, cervical spinal canal stenosis, cervical spondylosis myelopathy, MRI, cervical radiograph

