KORELASI DERAJAT *METASTATIC EPIDURAL SPINAL CORD COMPRESSION* (MESCC) DENGAN DERAJAT DAN TIPE FRAKTUR KOMPRESI VERTEBRA PADA PASIEN KANKER PAYUDARA

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ABSTRAK

Latar Belakang: Kanker payudara merupakan penyebab utama kematian pada perempuan di dunia. Sebanyak 70% kasus kanker payudara stadium lanjut mengalami metastasis tulang, terutama pada vertebra. Perkembangan metastasis ini dapat menyebabkan *Metastatic Epidural Spinal Cord Compression* (MESCC), yang meningkatkan risiko morbiditas seperti fraktur kompresi vertebra, nyeri, dan gangguan mobilitas. Penelitian ini bertujuan untuk mengidentifikasi korelasi antara derajat MESCC dengan derajat dan tipe fraktur kompresi vertebra pada pasien kanker payudara.

Metode: Penelitian analitik observasional dengan desain *cross-sectional* ini melibatkan 50 pasien kanker payudara yang mengalami metastasis vertebra dengan MESCC di RSUP Dr. Sardjito, Yogyakarta. Data diperoleh melalui pemeriksaan MRI *whole spine* dengan kontras.

Hasil: Ditemukan korelasi signifikan antara derajat MESCC dengan derajat fraktur kompresi vertebra ($p < 0,001$, $r = 0,711$). Semakin berat derajat MESCC, semakin berat derajat fraktur kompresi vertebra. Selain itu, terdapat korelasi signifikan antara derajat MESCC dengan tipe fraktur kompresi vertebra ($p = 0,003$, $r = 0,417$), di mana MESCC yang lebih berat meningkatkan kemungkinan tipe fraktur yang lebih berat seperti biconcave dan burst.

Kesimpulan: Terdapat korelasi signifikan antara derajat MESCC dengan derajat dan tipe fraktur kompresi vertebra. Semakin berat derajat MESCC, semakin berat derajat fraktur kompresi dan semakin besar kemungkinan untuk mengalami tipe fraktur yang lebih kompleks.

Kata Kunci: Kanker payudara, MESCC, fraktur kompresi vertebra, metastasis tulang, MRI

CORRELATION BETWEEN DEGREE OF *METASTATIC EPIDURAL SPINAL CORD COMPRESSION* (MESCC) WITH THE SEVERITY AND TYPE OF VERTEBRAL COMPRESSION IN BREAST CANCER PATIENTS

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ABSTRACT

Background: Breast cancer is one of the most prevalent cancers worldwide and a leading cause of death among women. Approximately 70% of patients with advanced breast cancer develop bone metastases, most commonly in the vertebrae. Vertebral metastases increase the risk of metastatic epidural spinal cord compression (MESCC), a condition that significantly impairs quality of life by disrupting mobility. However, studies correlating the degree of MESCC with the severity and type of vertebral compression fractures in breast cancer patients are scarce. This study aims to investigate this correlation.

Methods: This cross-sectional observational analytic study was conducted at Dr. Sardjito General Hospital, Yogyakarta. Fifty breast cancer patients with vertebral skeletal metastases and MESCC confirmed by MRI were included. Data were collected retrospectively and analyzed for correlations between MESCC severity, vertebral compression fracture severity, and fracture types using Spearman's correlation test for non-normally distributed data.

Results: A significant correlation was found between the degree of MESCC and the severity of vertebral compression fractures ($p < 0.001$, $r = 0.711$). Higher MESCC severity was associated with more severe vertebral compression fractures. Additionally, MESCC severity correlated with fracture types ($p = 0.003$, $r = 0.417$), with higher MESCC grades increasing the likelihood of biconcave and burst fracture types.

Conclusion: There is a significant positive correlation between the degree of MESCC and both the severity and type of vertebral compression fractures in breast cancer patients with skeletal metastases. Patients with more severe MESCC are more likely to experience more severe vertebral compression fractures and more complex fracture types such as biconcave and burst fractures.

Keywords: breast cancer, MESCC, vertebral compression fracture, skeletal metastasis, biconcave fracture, burst fracture