

https://dspace.org/

Comparison of ultrasound and magnetic resonance Imaging findings in patients with suspected placenta accreta spectrum at Chris Hani Baragwanath Academic Hospital

2024
https://hdl.handle.net/10539/37912

Downloaded from a DSpace repository. https://dspace.org/

Name of Candidate:Sikhosonke Tsobo Student Number: 0702920J

Comparison of Ultrasound and Magnetic Resonance Imaging findings in patients with suspected placenta accreta spectrum at Chris Hani Baragwanath Academic Hospital.

Abstract

- **Background:** Placenta accreta spectrum (PAS) is a serious condition that is increasing in prevalence with an increase in the caesarean section rate. This condition is associated with significant haemorrhage. Accurate diagnosis and adequate surgical planning are associated with favourable outcomes. Ultrasound and MRI are used in prenatal diagnosis of this condition.
- **Objectives**: To compare ultrasound and MRI report findings with histopathology or surgical findings in patients with suspected PAS at Chris Hani Baragwanath Academic Hospital. To compare the diagnostic accuracy of PAS between the junior and senior (>5 years' experience) radiologists' MRI reports.
- **Method**: A retrospective comparison of 14 MRI and 18 ultrasound report findings of patients with suspected PAS were compared with histopathologic or surgical report findings. These imaging modalities' sensitivity, specificity, accuracy, true positive, true negative, false negative and false positive values were determined. The accuracy, sensitivity and specificity of MRI reports were determined based on radiologists' experience.
- **Results**: Ultrasound correctly diagnosed PAS in 10/18(56%) of the patient reports. MRI correctly diagnosed PAS in 6/14(43%) of reports. Ultrasound reports had sensitivity and specificity of 90.9% and 28.6%, respectively, while MRI reports had sensitivity and specificity of 20% and 75%, respectively. The senior radiologists correctly diagnosed PAS in 3/7(42%) of reports, while junior radiologists correctly diagnosed PAS in 4/6(67.7%) of MRI reports.
- **Conclusion**: There was no statistically significant difference in the accuracy of Ultrasound and MRI in diagnosing PAS. There was no statistically significant difference in diagnosis of PAS between junior and senior radiologists.