

Retrospective Evaluation of Enthesopathy, Sacroiliitis and Clinical Parameters in Ankylosing Spondylitis Patients

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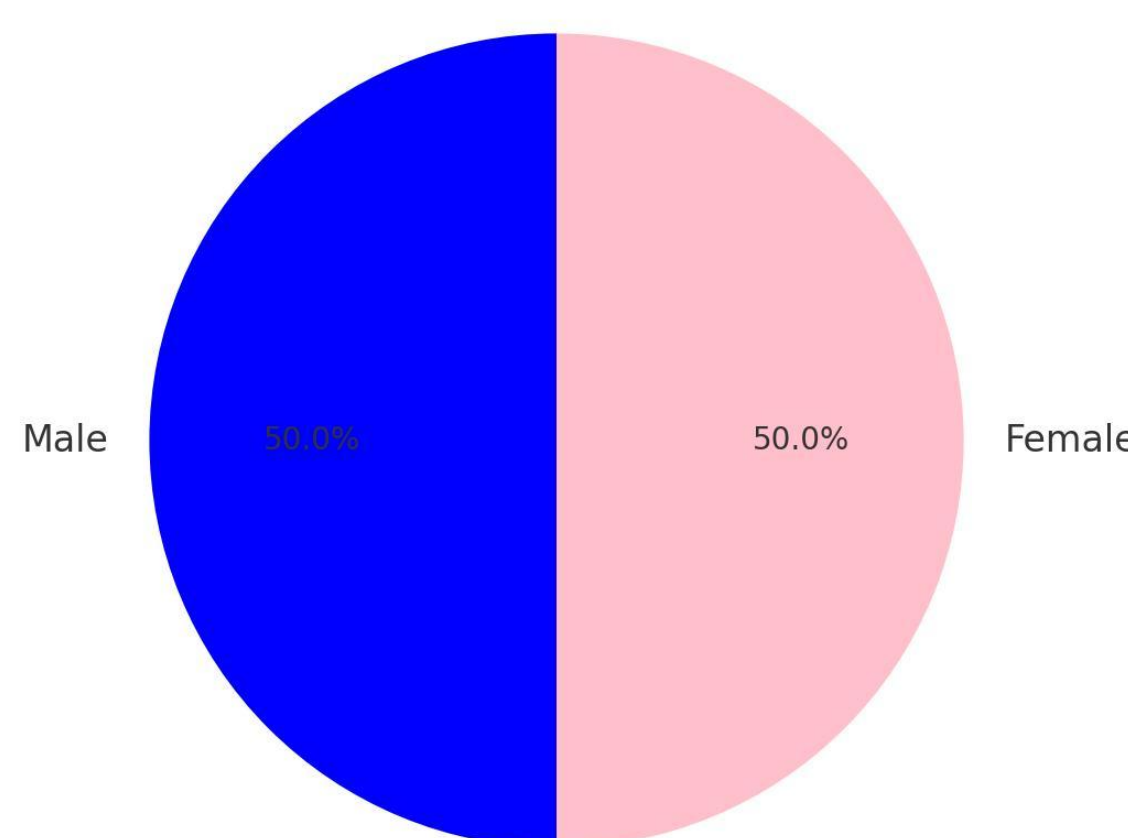
INTRODUCTION

Ankylosing Spondylitis (AS) is a chronic inflammatory disease affecting the spine and sacroiliac joints, leading to progressive vertebral fusion. Enthesopathy, inflammation at tendon and ligament insertion sites, is a key feature of AS. Early diagnosis and monitoring of disease activity are essential for managing AS. Magnetic Resonance Imaging (MRI) is effective in detecting early enthesopathic changes, while Pelvic AP radiographs are used for later-stage changes. This study compares clinical parameters and imaging findings (Sacroiliac MRI vs. Pelvic AP) in AS patients.

METHOD

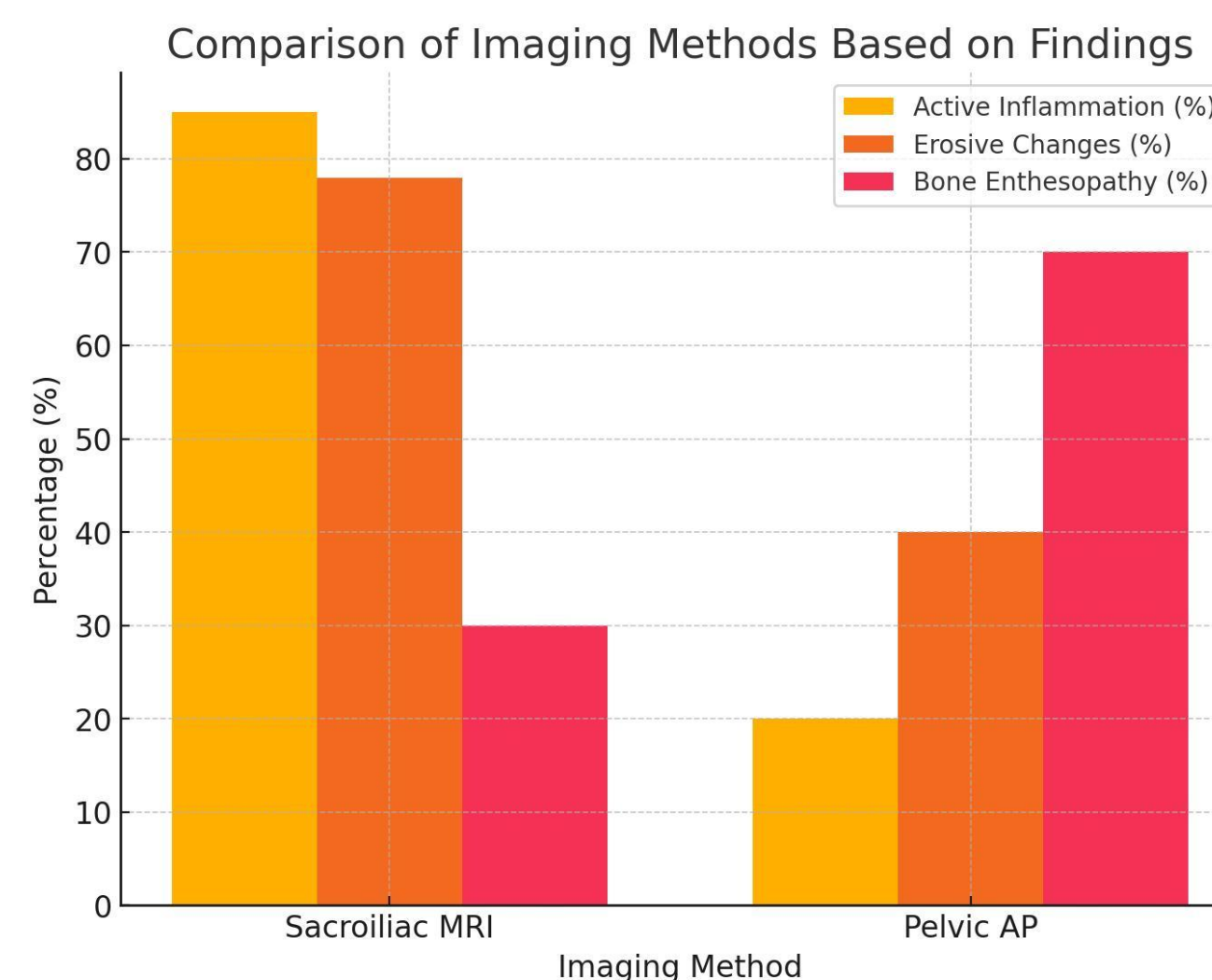
This retrospective study reviewed the imaging records of 2183 AS patients in the Department of Physical Therapy and Rehabilitation at Bezmialem Vakıf University (2019-2024). After excluding incomplete imaging data, 60 patients (30 males, 30 females, aged 20-50 years) were included. Imaging methods included Sacroiliac MRI (Group 1) and Pelvic AP radiographs (Group 2). Findings were compared regarding enthesopathy and sacroiliitis, and clinical parameters such as age, gender, disease duration, and symptom severity were recorded.

Gender Distribution of Selected Patients

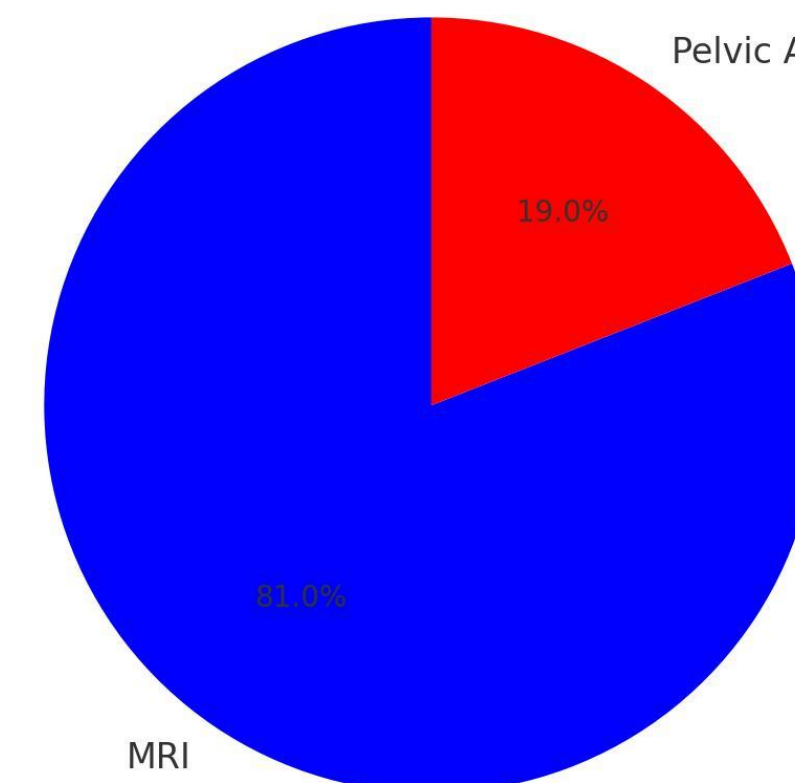


RESULTS

60 patients (30 males, 30 females) were included. In the Sacroiliac MRI group, significant findings included contrast enhancement (suggesting active inflammation) and erosive changes in the sacroiliac joints ($p < 0.05$), indicating acute sacroiliitis. Joint space narrowing was also observed. Pelvic AP radiographs revealed enthesopathies in bones but missed soft tissue inflammations. Statistically significant differences were found in the early detection of inflammation between MRI and radiographic methods ($p < 0.01$). The severity of symptoms was more pronounced in patients with MRI evidence of active sacroiliitis.



Early Inflammation Detection Rate of MRI and Pelvic AP



CONCLUSION

This study supports Sacroiliac MRI for early detection of inflammatory changes in Ankylosing Spondylitis. MRI provides better assessment of active disease, while Pelvic AP radiography remains valuable due to its accessibility and lower cost. A hybrid approach, combining both methods, is recommended for comprehensive evaluation, especially for early-stage disease detection.

Keywords: Ankylosing Spondylitis, Sacroiliac MRI, Pelvic AP, Enthesopathy, Sacroiliitis, Radiography

REFERENCES

- Arnett FC. Ankylosing spondylitis. In: Koopman WJ editor. Arthritis and allied conditions. A Textbook of Rheumatology. Baltimore, Williams and Wilkins, 1997: 1197-1208.
- Van der Ünden. Ankylosing spondylitis. In: Kelley WN, Haris ED, Ruddy S, Sledge CB, editors. Textbook of Rheumatology. W.B. Saunders Company, Philadelphia, 1997: 969-982.
- Calin A. The Dunlop-Dottridge Lecture. Ankylosing spondylitis: defining disease status and the relationship between radiology, metrology, disease activity, function, and outcome. J Rheumatol 1995;22(4):740-4.
- Miller MM (1984) Ankylosing spondylitis, Reiter's syndrome, psoriatic arthritis, and arthritis of inflammatory bowel disease. Prim Care 11(2):271-282