

¹⁸F-FDG PET assessment of early treatment response of articular and extra-articular foci in newly diagnosed rheumatoid arthritis

Abstract

In the present communication, we illustrate ¹⁸F-FDG-PET findings in a newly diagnosed patient of rheumatoid arthritis (RA), who underwent PET evaluation before and early in the course of treatment. The patient was a 41 years old female, a newly diagnosed case of RA, presented with gradual onset pain in the index fingers and wrist joints bilaterally since 1 year that particularly exacerbated in the morning. After 6 weeks of treatment with hydroxyquinone, methotrexate and prednisolone patient's post treatment ¹⁸F-FDG-PET scan showed modest reduction in the ¹⁸F-FDG uptake in the affected joints. Uptake in the thyroid gland was similar to the baseline study whereas axillary lymph nodal uptake and uptake in the right arm subcutaneous nodules previously noted was significantly reduced with evidence of minimal residual activity at this point. *In conclusion*, since metabolic changes precede morphologic changes, ¹⁸F-FDG-PET could have a potential role in metabolic treatment response assessment of RA patients and could predict future outcome. The differential response of the articular and extra-articular foci as well as axillary nodes to disease modifying anti-rheumatic agents is noteworthy and requires further investigation.

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