



Usefulness of Low-dose CT in Psoriasis and Psoriatic Arthritis Patients with Non-specific Axial Symptoms

Serife Asya Germe¹, Gizem Ayan¹, Sibel Dogan², Basak Yalici Armagan², Levent Kilic¹, Umut Kalyoncu¹

¹ Hacettepe University, Department of Internal Medicine, Division of Rheumatology, Ankara, Turkey

² Hacettepe University, Department of Dermatology and Venereology, Ankara, Turkey

Background:

Low-dose CT (LdCT) has been shown advantageous over conventional radiography (CR) in showing spinal structural changes in Axial Spondyloarthritis. There is no data on the value of LdCT in psoriatic arthritis (PsA) patients.

Objectives:

The aim of this study is to determine the contribution of spinal LdCT to the diagnosis and disease severity in patients with psoriasis (PsO) and PsA with non-specific axial symptoms.

Methods:

143 PsO patients referred from the Dermatology Outpatient Clinic in the last 9 months were evaluated; patients with any axial symptoms (n=116) were included. 47 of 116 patients (40.5%) had LdCT. Patients were evaluated with pelvis CR, lumbar/ cervical CR and whole spinal LdCT. All CRs and spinal CTs (coronal, sagittal planes) were evaluated by two rheumatologists. Age, gender, PsO and PsA disease duration were recorded.

Patients were divided into four groups according to CR findings; 1. Modified New York criteria (mNY) not met, 2. Only sacroiliitis (SI) according to mNY, 3. Sacroiliitis and syndesmophyte (SIN) present, 4. Only syndesmophyte.

Syndesmophytes were determined between C2-S1. The contribution of spinal LdCT to axial involvement was evaluated.

Results:

47 patients (n=15 (32%) with inflammatory, n=32 (68%) non-specific axial symptoms) were evaluated. The mean age of the patients (68.1% female, 31.9% male) was 47.4 years. Median duration of PsO was 15 years. Median disease duration of 10 patients with a previous diagnosis of PsA was 4.5 years. 12 (25.5%) patients had only PsO and 35 (74.5%) patients had PsA. 25/35 (71%) of those with PsA had axial involvement (SI and/or SIN) according to CR, CR was normal in 10/35 (29%) patients. When the whole spinal LdCT was evaluated, SIN was detected in 8/12 (66.7%) of patients with only PsO (8 thoracic, 4 lumbar, 2 cervical). 30/35 (85.7%) of PsA patients had SIN (Figure).

In 15/22 (68%) of those with normal CR, 7/9 (77.7%) of those with only SI in CR, 5/5 (100%) of those with SI and SIN in CR, 11/11 (100%) of those with only SIN in CR were found to have syndesmophyte on LdCT. Accordingly, 38/47 (80.8%) patients had at least one syndesmophyte on LdCT.

Conclusion:

When PsO and PsA patients with non-specific axial symptoms were evaluated with spinal LdCT, new syndesmophytes were found in a significant proportion of patients, additionally an increased distribution of syndesmophytes was observed. The thoracic vertebra is one of the most frequently involved area in psoriatic disease similar with SpA. Comparative studies with a healthy control group are needed to determine the potential role of LdCT.

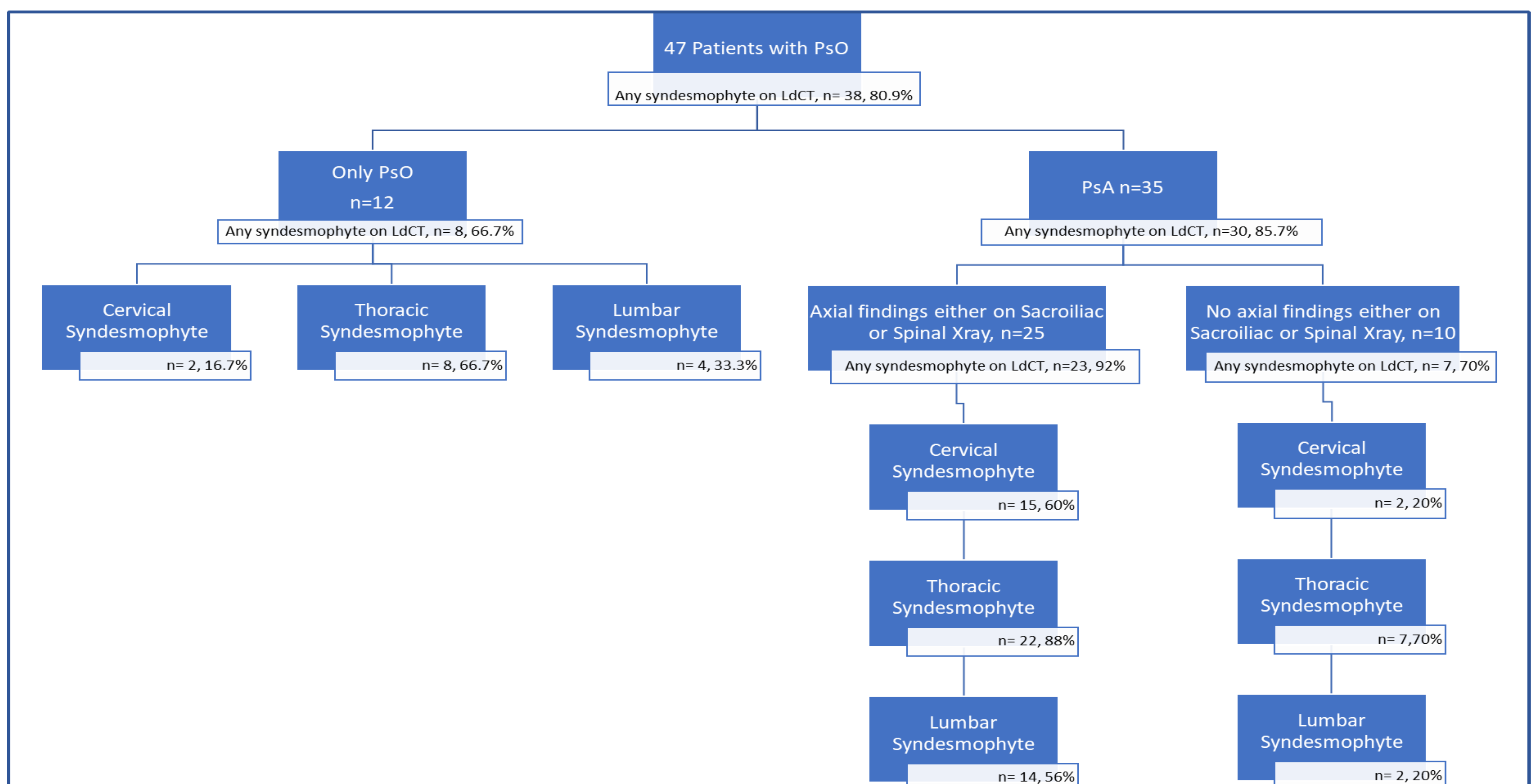


Figure: Distribution of LdCT findings with CR results