FOOT INVOLVEMENT

IN PATIENTS WITH PSORIATIC ARTHRITIS: A PILOT STUDY

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IRON DEFICIENC

DIABETIC NEUROPA

VENOUS INSUFFICIENCY

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PERIPHERAD AS DUAR DI

PSORIASIS

CONGESTIVE HEART

THYROTOXICOSIS

NFLAMMATORY ARTHRITIS CHARCOT FOC DT MARIE TOOTH

PSORIATRIC ARTHRITIS

Epidemiology

- Prevalence of psoriasis (PsO) varies from 0.09% in Tanzania to 11.4% in Norway
- Compared to a lesser extent of 0.3% in Hong Kong
- Up to 30% of PsO sufferers will develop psoriatic arthritis (PsA) in later life

(WHO, 2016; Yip, 1984; Gladman, 2009)

Background

- A type of systemic inflammatory arthropathies
- Linked to the HLA-B27 genotype
- Associated with skin PsO and other comorbidities including diabetes, obesity and metabolic syndrome

PSORIATRIC ARTHRITIS

Foot involvement

- Foot involvement is common in PsA, including dystrophic nails, toe dactylitis and Achilles enthesitis
- Arthritis can precede skin rash in 15% of patients
- Early detection is important for prompt intervention

(Ritchlin et al., 2017; Gladman, 2009)

Objectives

- To describe the clinical characteristics of foot pathologies among PsA patients
- To gain a better understanding of their current foot condition





Methodology

Sampling

 Consecutive sampling at TKOH rheumatology clinics during Jun-Dec 2017

Inclusion criteria

- Aged 18 or above
- Fulfilled the Classification Criteria for Psoriatic Arthritis (CASPAR)
- Able to give written consent

Exclusion criteria

Either foot amputated

Table 3. Classification Criteria for Psoriatic Arthritis (CASPAR)^{13,21}

Criteria	Point Value [®]
Current psoriasis	2
Personal history of psoriasis (in the absence of current psoriasis)	1
Family history of psoriasis (in the absence of current psoriasis or a personal history of psoriasis)	1
Dactylitis (current or personal history)	1
Juxta-articular new bone formation	1
Rheumatoid factor negativity	1
Psoriatic nail dystrophy (onycholysis, pitting, and/or hyperkeratosis)	1
The diagnosis of psoriatic arthritis requires a total soor	o of S2 in

The diagnosis of psoriatic arthritis requires a total score of ≥3 in patients with psoriasis and musculoskeletal symptoms (arthritis, enthesitis, and/or spondylitis).

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FOOT POSTURE INDEX

- 1. Talar head palpation
- 2. Supra & infra lateral malleolar curvature
- 3. Inversion/eversion of calcaneus
- 4. Bulging in talonacvicular joint
- 5. Congruence of the medial longitudinal arch
- 6. Abduction/adduction of the forefoot on the rearfoot





Reference values

- Normal = 0 to +5
- Pronated/flatfoot = +6 to +9, highly pronated 10+
- Supinated/high arch foot = -1 to -4, highly supinated -5 to -12

(Redmond, 2005)

Pronated (+2)



Neutral (0)



Supinated (-2)

Supinated (-2)

Neutral(0)









(Redmond, 2005)





Neutral (0)











Supinated (-2)











Pronated (+2)

DEMOGRAPHIC RESULTS





Overweight defined as 23≤BMI<25; obesity defined as BMI≥25 (WHO, 2000)

RESULTS









PREVALENCE OF FOOT PATHOLOGIES

Type of **foot** pathologies, %





	Present study, %	Previous literatures (Non- PsA population), %
Foot pathologies	96.2	64.0 (Chan & Chong, 2002)
Hallux valgus	30.8	31-37.1 (Dunn <i>et al.,</i> 2004; Shibuya <i>et al.,</i> 2010; Hannan <i>et al.,</i> 2013)
Lesser toe deformities	38.4	29.6-60 (Dunn <i>et al.,</i> 2004; Shibuya <i>et al.,</i> 2010; Hannan <i>et al.,</i> 2013)
Foot posture index, mean	5.25	2.4 (Redmond <i>et al.,</i> 2008)
Flatfeet	57.7	2.9-34 (Shibuya <i>et al.,</i> 2010; Hannan <i>et al.,</i> 2013; Sachithanandam & Joseph, 1995)



Limitations

- f Small sample size (n=26)
- High non-response rate (>80%)
- No comparison with healthy individuals

Improvements

- Enroll more clinical sites
- Establish multidisciplinary clinic for joint assessment
- Conduct inter-rate reliability test
- Plan for case-control study

Implications

- Podiatrists' involvement in foot pain and deformity management was often overlooked (Carter *et al.*, 2016)
- Podiatrist-to-population ratio in Hong Kong=1:140000, compared to 1:4600 in the UK
- Podiatric scope of practice includes high risk foot ax, foot ulcer mx, biomechanical ax, foot orthoses mx etc.
- UK guidelines strongly advocate referral to podiatrist for foot disorder management (Arthritis and Musculoskeletal Alliance, 2004; Scottish Intercollegiate Guideline Network, 2000)





CONCLUSION

- Prevalence of foot pathologies was high among patients with PsA (96.2%)
- Toe deformities (61.5%) and flatfeet (57.7%) were the most common types
- Podiatrists' input was often overlooked
- Early intervention for existing foot problems can improve long term outcomes
- Multidisciplinary approach should be encouraged

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END OF PRESENTATION

Thank you!