CASE REPORT

Spondylitic psoriatic arthritis presenting as acute urinary retention

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SUMMARY

Psoriatic arthritis is a seronegative arthropathy occurring in the presence of psoriasis. In majority of cases, typical psoriatic skin lesions precede joint disease, making diagnosis of psoriatic arthritis without typical skin lesions, a diagnostic challenge. Nail lesions are commonly seen in patients affected by this condition, making it a useful clue in the diagnosis of psoriatic arthritis. This is a case of a 58-year-old Filipino woman presenting with sudden acute urinary retention and weakness of both lower extremities accompanied with active polyarthritis. Onycholytic nail changes initially thought to be a fungal nail infection led to the diagnosis of psoriatic arthritis involving the spine. The patient was eventually treated with methotrexate and non-steroidal anti-inflammatory drugs leading to full resolution of symptoms. The patient is currently ambulatory and on regular follow-up. This case report highlights the importance of clinical and physical findings particularly the nails that would lead to a diagnosis of psoriatic arthritis.

BACKGROUND

Psoriasis is an inflammatory skin disorder associated with triggering factors such as trauma, infection and drugs, which can lead to diverse clinical manifestations among individuals at risk. Majority (90%) of cases is characterised by the presence of erythematous, scaly and silvery plaques with well-defined margins, usually involving the extensor surfaces of the limbs.¹ It affects approximately 2% of the world population, but its prevalence varies from 0% to 11.8% depending on the population studied where Asians seem to have the lowest prevalence.²

Psoriatic arthritis, on the other hand, is a chronic seronegative form of arthritis associated with psoriasis.³ It develops in 5–42% of patients with psoriasis. It is a chronic and dynamic inflammatory disease leading to various clinical presentations throughout the disease making its diagnosis difficult.⁴ As skin lesions commonly precede arthritis in majority (75%) of patients, arthritis preceding typical skin lesions occurs in only 15%.⁵ In this rare type of psoriatic presentation, nail lesions are very common (87%) and can be very helpful in differentiating initial psoriatic arthritis from other forms of arthritides.⁶

Most would initially be diagnosed with rheumatoid arthritis for peripheral joint involvement and ankylosing spondylitis for axial involvement until the appearance of psoriatic plaques changes its impression. With this diagnostic challenge, we aim

to present a case of axial psoriatic arthritis without typical psoriatic skin lesions initially presenting with acute urinary retention. This case will highlight the clinical challenges and diagnostic hurdles encountered before arriving at the correct diagnosis. This paper also aims to provide better clinical clues and insights with rare forms of psoriatic arthritis that may help in the earlier diagnosis and prompt treatment. This paper would also feature the distinct nail changes in patients with psoriasis that might provide earlier diagnostic clues towards the diagnosis of psoriatic arthritis despite absence of typical skin lesions.

CASE PRESENTATION

This is a case of an apparently healthy 58-year-old Filipino woman admitted at our institution presenting with acute urinary retention leading to anuria. She presented with a 2-week history of undocumented low-grade fever associated with vague low back pain, malaise and generalised body weakness. Persistence and worsening of her symptoms led to inability to effectively ambulate leading to a bedridden state. She also noted beginning stiffness and pain of her joints involving the knees, elbows, wrists and hands. She sought medical consultation at a different institution where she was assessed to have possible acute gouty arthritis and urinary tract infection and was given non-steroidal anti-inflammatory drug and unrecalled antibiotics.

Persistence of symptoms despite medications led to emergency consultation at our institution. On consultation, the patient already had acute urinary retention leading to anuria and bladder wall distension. Foley catheter insertion immediately draining 2.5 L of urine led to immediate relief of hypogastric discomfort. The patient was initially thought to have an ongoing urinary tract infection and a

Figure 1 Psoriatic hand (A) and toe (B) nails showing severe onycholysis and nail pitting.

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Figure 2 Thoracolumbosacral X-rays revealing rightward curvature of the lumbar spine (A), anterior height reduction of the T12-weighted vertebrae (B) and narrowing of the L2–L3 and L3–L4 intervertebral discs (C).

possible spinal cord abnormality leading to a neurogenic bladder.

Detailed physical examination included tenderness over both elbows, right wrist, metacarpophalangeal and proximal interphalangeal joints of both hands, distal interphalangeal joints of the right hand and both knees. Swollen joints included the right shoulder, and proximal and distal interphalangeal joints of the right hand. Onycholysis of fingernails and toenails were also noted (figure 1). On neurological examination, there were no sensory deficits or hyperaesthesia noted. Motor examination of C5–T1 and L2–S1 was not very accurate due to the limitation by pain on active range of motion. Chest and abdominal findings were unremarkable.

INVESTIGATIONS

Several workups were carried out to further investigate the cause of sudden urinary retention. Workups included kidney ultrasound which showed normal kidneys, ureters and urinary bladder without any stone formation or hydronephrosis. A transvaginal ultrasound revealed an atrophic uterus with thin endometrium, ruling out gynaecological pathology as a cause of urinary retention. During admission, azotaemia (serum creatinine→250 µmol/L and blood urea nitrogen→33.90 mmol/L), hyperuricaemia (0.70 mmol/L) and hypoalbuminaemia (21 g/L) were noted. Complete blood count showed leucocytosis ($14 \times 10^9/L$) and normocytic normochromic anaemia (107 g/L). Upper gastrointestinal endoscopy showed erosive gastritis, hiatal hernia, oesophagitis and positivity for *Helicobacter pylori* test.

Routine chest X-ray carried out revealed cardiomegaly with minimal pleural thickening on the left. Cranial CT scan carried out to rule out cerebrovascular disease did not show signs of infarction, vaculitis or bleeding. Thoracolumbar X-rays showed a generalised osteopenia and a 30% anterior height reduction of the T12-weighted vertebra with associated narrowing of the T11-weighted and T12-weighted intervertebral disc spaces. There was also narrowing of the L2–L3 and L3–L4 intervertebral disc spaces (figure 2). A rightward curvature of the lumbar spine was also noted. Hand and wrist anteroposterior, oblique and lateral views showed periarticular osteopenia, with small spurs at the radial aspects of both trapeziums (figure 3). Bilateral knee X-rays showed absence of lytic lesions and an intact femoropatellar joint space (figure 4).

Erythrocyte sedimentation rate was elevated while the rheumatoid factor was negative. Given that it was a seronegative arthritis and that the nail clippings sent for potassium hydroxide smear was negative, the impression was revised to seronegative arthritis, most probably psoriatic arthritis. As workup for possible Pott's disease, stool acid-fast bacilli (AFB), urine AFB were sent, all of which turned out to be negative. Arthrocentesis of the right knee was carried out revealing a serosanguinous synovial fluid in the absence of crystals.

TREATMENT

During the course of admission, there was note of limitation in the range of motion over the left shoulder which was attributed to a possible adhesive capsulitis. Intralesional injection of

Figure 3 Left (A, B) and right (C, D) hand and wrist radiographs showing periarticular osteopenia.

Figure 4 Bilateral knee radiographs on lateral (A) and anteroposterior (B) view showing generalised decrease in bone density, with maintenance of the femorotibial and femoropatellar joint spaces.

posterior shoulder with lidocaine and 1 mL of methylprednisolone relieved the pain, enabling the patient to move the affected shoulder more freely. Hepatitis profile carried out prior to starting the disease-modifying agents revealed a past hepatitis B infection prompting initiation of lamivudine. The patient was then started on methotrexate, alendronate plus cholecalciferol, bethanechol and anti-*H pylori* regimen, which included amoxicillin, clarithromycin and omeprazole.

OUTCOME AND FOLLOW-UP

Gradual clinical improvement was evident during the succeeding days of treatment. The patient was eventually discharged improved, able to urinate freely and able to ambulate independently and is on regular follow-up at the rheumatology clinic.

DISCUSSION

Psoriatic arthritis can simply be defined as a chronic form of arthritis associated with psoriasis which can be easily diagnosed. However, absence of typical psoriatic skin lesions lead to difficulty and confusion due to its similarities with other joint diseases like rheumatoid arthritis and ankylosing spondylitis. Its actual prevalence and incidence varies across different races and population. Polyarthritis during the fourth decade of life is commonly seen in Asians while arthritis mutilans and eye involvement are rarely documented.⁷

Nearly one-third of patients with psoriasis will develop psoriatic arthritis while only a minority (7–30%) will present as psoriatic arthritis without psoriasis. With the absence of typical psoriatic skin lesions, the correct diagnosis will depend mainly on the recognition of unique articular features of the disease.⁸ Initially thought as a benign indolent disease, the current understanding of psoriatic arthritis reveal dynamism and aggressiveness that almost half will demonstrate joint erosions within 2 years of onset if left untreated.⁹ With this in mind, earlier

diagnosis would be of great help to prevent the development of future articular dysfunction.

Rheumatoid arthritis and psoriatic arthritis present similarly but several unique features may provide certain clues for earlier diagnosis and suspicion (table 1).^{10 11} Considered as a seronegative spondyloarthropathy, psoriatic arthritis of the spine is an exclusive feature of psoriatic arthritis affecting almost half of the patients with psoriatic arthritis.¹² Another unique feature of psoriatic arthritis is the presence of nail dystrophy (onycholysis) found in most patients. Its presence connotes worse severity.¹³ The presence of nail abnormalities in a patient with inflammatory arthritis should raise the suspicion of a possible psoriatic arthritis especially when there is no observed psoriasis of the skin. Onychomycosis which is common among patients with psoriasis is a very important differential for psoriatic nails necessitating culture test of nail scraping for correct diagnosis.¹⁴

Most of the laboratory features seen in psoriatic arthritis are not helpful. Inflammatory markers (erythrocyte sedimentation rate and C reactive protein) are usually normal or minimally elevated.¹⁵ Radiographic imaging are helpful in diagnosis only when significant joint damage has already occurred.¹⁶ MRI and CT scan can detect early joint changes even in an asymptomatic patient but are non-specific to provide a definite diagnosis.¹⁷ Despite the emergence of numerous targeted therapies for psoriatic arthritis, methotrexate remains to be the drug of choice for most of the patients.¹⁸ The prognosis of patients with psoriatic arthritis is not only dependent on the progression of joint damage but also with the systemic effect of the ongoing inflammation and disease activity. Just like other inflammatory diseases, majority of patients with psoriatic arthritis are at an increased risk of death and will succumb to cardiovascular causes.^{19 20}

Learning points

- ▶ Psoriatic arthritis should always be considered in patients presenting with arthritis even in the absence of typical psoriatic skin lesions.
- ▶ Nail abnormalities (onycholysis, pitting, horizontal ridging) in a patient with arthritis can provide clinical clues for earlier detection of psoriatic arthritis. Simple physical examination and plain radiographic tests are important for clinching the diagnosis. Hence knowledge of the unique clinical and radiological features of patients with psoriatic arthritis might help significantly.
- ▶ Newer imaging modalities like CT scan and MRI might help detect early joint and periarticular changes leading to earlier management.
- ▶ Methotrexate remains to be the DMARD of choice for psoriatic arthritis but newer biologicals are on their way to provide improvement and possibly cure in patients unresponsive to conventional drugs.

Table 1 Clinical comparison of psoriatic arthritis with rheumatoid arthritis

Clinical parameter	Psoriatic arthritis	Rheumatoid arthritis
Joint predilections	DIPs	Wrist, PIPs
Involvement pattern	Asymmetric	Symmetric
Spinal involvement	Present	Absent
Nail involvement	Present	Absent
Rheumatoid factor	Negative	Positive
Others	Dactylitis, telescoping of digits, enthesitis	Rheumatoid nodules

DIP, distal interphalangeal; PIP, proximal interphalangeal.

Contributors TENL is the primary author and senior resident of the patient. MLVQ is the junior resident who took care of the patient and provided pictures and information of the patient. MLT is the attending consultant and editor of the manuscript.

Competing interests None.

Patient consent Obtained.

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REFERENCES

- 1 Griffiths CE, Barker JN. Pathogenesis and clinical features of psoriasis. *Lancet* 2007;370:263–71.
- 2 Gudjonsson JE, Elder JT. Psoriasis: epidemiology. *Clin Dermatol* 2007;25:535–46.
- 3 Ruiz DG, de Azevedo MN, Santos OL. Psoriatic arthritis: a clinical entity distinct from psoriasis. *Rev Bras Rheumatol* 2012;52:623–38.
- 4 Bruce IN. Psoriatic arthritis: clinical features. In: Hochberg MC, Silman AJ, Smolen JS, Weinblatt ME, Weisman MH. eds. *Rheumatology*. 3rd edn. Philadelphia: Mosby, 2003:1241–52.
- 5 Antoni CE. Psoriatic arthritis: etiology and pathogenesis. In: Hochberg MC, Silman AJ, Smolen JS, Weinblatt ME, Weisman MH. eds. *Rheumatology*. 3rd edn. Philadelphia: Mosby, 2003:1253–62.
- 6 McGonagle D, Tan AL, Benjamin M. The nail as musculoskeletal appendage—implications for an improved understanding of the link between psoriasis and arthritis. *Dermatology* 2009;218:97–102.
- 7 Tam LS, Leung YY, Li EK. Psoriatic arthritis in Asia. *Rheumatology* 2009;48:1473–7.
- 8 Slobodin G, Rosner I, Rosenbaum M, et al. Psoriatic arthropathy: where now? *Isr Med Assoc J* 2009;11:430–4.
- 9 Kane D, Stafford L, Bresnahan B, et al. A prospective, clinical and radiological study of early psoriatic arthritis: an early synovitis clinic experience. *Rheumatology* 2003;42:1460–8.
- 10 Gladman DD. Clinical aspects of the spondyloarthropathies. *Am J Med Sci* 1998;316:234–8.
- 11 van der Heijde D, Sharp J, Wassenberg S, et al. Psoriatic arthritis imaging: a review of scoring methods. *Ann Rheum Dis* 2005;64:61–4.
- 12 Grethe JA. Imaging the spine in arthritis—a pictorial review. *Insights Imaging* 2011;2:177–91.
- 13 Jones SM, Armas JB, Cohen MG, et al. Psoriatic arthritis: outcome of disease subsets and relationship of joint disease to nail and skin disease. *Br J Rheumatol* 1994;33:834–9.
- 14 Natarajan V, Nath AK, Thappa DM, et al. Coexistence of onychomycosis in psoriatic nails—a descriptive study. *Indian J Dermatol Venereol Leprol* 2010;76:723.
- 15 Bogliolo L, Alpini C, Caporali R, et al. Antibodies to cyclic citrullinated peptide in psoriatic arthritis. *J Rheumatol* 2005;32:511–15.
- 16 Welsing P, Landewé R, van Riel PL, et al. The relationship between disease activity and radiological progression in patients with rheumatoid arthritis: a longitudinal analysis. *Arthritis Rheum* 2004;50:2082–93.
- 17 Ory PA, Gladman DD, Mease PJ. Psoriatic arthritis and imaging. *Ann Rheum Dis* 2004;64:55–7.
- 18 Gossec L, Smolen JS, Gaujoux-Viala C, et al. European league against rheumatism recommendations for the management of psoriatic arthritis with pharmacological therapies. *Ann Rheum Dis* 2012;71:4–12.
- 19 Wong K, Gladman DD, Husted J, et al. Mortality studies in psoriatic arthritis: results from a single outpatient clinic. I. Causes and risk of death. *Arthritis Rheum* 1997;40:1868–72.
- 20 Gladman DD, Farewell VT, Wong K, et al. Mortality studies in psoriatic arthritis: results from a single center. II. Prognostic indicators for death. *Arthritis Rheum* 1998;41:1103–10.

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