Correspondences

Leishmanial Abscess

Sandeep Arora, Satish Mendonca¹, Ajay Malik², V Ramesh³, Renu Khandpal

From the Departments of Dermatology, ¹Nephrology and
²Pathology, Base Hospital, Army College of Medical Sciences,
³Department of Dermatology, Safdarjang Hospital, New Delhi, India.
E-mail: aroraderma@gmail.com

Indian J Dermatol 2017:62(4):431-33

Sir,

Cutaneous leishmaniasis (CL) may have a varied clinical presentation, ranging from a subclinical infection, localized disease to a disseminated form.¹ Atypical presentations often lead to their missed diagnosis or their mistreatment as cutaneous tuberculosis or deep fungal infections.² Cutaneous abscess primarily caused by leishmania is a very rare presentation, especially in the absence of a coexistent bacterial infection.³ First-line therapy for CL includes antimonials which may cause transient renal impairment, recovering on symptomatic treatment or on discontinuing the offending agent.

A 54-year-old male presented with progressively increasing size and number of abscesses on the face and forehead of 10 months’ duration while residing in Jammu. He had been investigated and managed for a clinical
suspicion of pyogenic abscesses, cutaneous tuberculosis, and deep fungal infection with oral, anti-tubercular therapy for 4 months followed by itraconazole for 2 months presumably on clinical suspicion as none of the investigations had confirmed either of the above diagnoses.

He did not recollect insect bite or trauma at these sites. There was no pain or itching, had occasional discharge of purulent material from one of these lesions, no constitutional or systemic symptoms, weight loss or a past history of similar complaints.

At initial presentation to us, he had a large nontender firm abscess with areas of induration and crustng on the right temporoparietal region and smaller abscesses on the left temporoparietal region and chin [Figure 1] with no regional lymphadenopathy. Systemic examination revealed no abnormality.

Investigations revealed normal hemogram, biochemical profile, radiograph chest, and ultrasound scan abdomen. Enzyme-linked immunosorbent assay for human immunodeficiency virus infection was negative; mantoux was nonreactive. Skin biopsy revealed a granulomatous infiltration positive for *Leishmania donovani* (LD) bodies and negative for acid-fast bacilli [Figure 2]. Immunochromatography test for rK39 was negative. Polymerase chain reaction (PCR) for leishmania was positive. Bacterial culture and fungal culture from aspirate of the larger abscess and tissue specimen were negative.

He was placed on injection sodium stibogluconate 850 mg intravenous daily with a treatment plan to continue for 28 days. Repeat hematological and biochemical parameters on the second and 4th day were normal. On the 6th day of treatment, he developed sudden reduction in urine output to <25 ml in 24 h. Renal function parameters revealed a serum creatinine of 1.8 mg/dl which subsequently rose rapidly from 7th day to 6.3 mg/dl. He was placed on daily hemodialysis.

A renal biopsy done on the 10th day revealed acute tubular necrosis (ATN) characterized by tubular dilatation, presence of intraluminal casts with necrosis of epithelial cells, and tubular basement membrane denudation and preserved glomerular, interstitial, and vascular components [Figure 2]. He was managed with twice-weekly hemodialysis to which his renal functions recovered over the next 2 weeks. At the end of 10 days, after stopping sodium stibogluconate on the 6th day, his cutaneous lesions had shown improvement with reduction in size and partial healing of lesions [Figure 1]. He was planned for management for CL after a period of convalescence. He however reported back with dengue shock syndrome and succumbed to it over the next few days.

CL continues to be a public health problem with newer foci of endemicity being described in India.[4] Cutaneous manifestations of leishmaniasis are dictated by the host cellular immune response and parasite factors such as leishmania species or coinfections with other organisms; CL has not been described to cause such abscesses. First line of management of CL continues to be antimonials if the lesions are large, multiple, affect the joints, hands or feet, or if the patient is immunosuppressed.[5] Antimonials are generally considered safe with even larger series reporting only more common side effects of myalgia, arthralgia, anorexia, and occasionally, pancreatic and cardiac effects manifesting with pancreatic amylase elevations and electrocardiographic abnormalities.[6] Pentavalent antimonial compounds rarely induce severe renal injury although mild renal dysfunction has been reported which subsides on discontinuation or after a treatment holiday.[7] Acute renal injury with glomerular
involvement may occur in Jarisch–Herxheimer reaction like reaction while on treatment. Early signs of tubular injury in the absence of glomerular, interstitial, or vascular component injury may not manifest biochemically till 24–48 h after the event as in our case. Although novel markers to detect this event have been described, clinical suspicion, with a close watch on urine out and general patient condition are important in day-to-day practice.\[6\]

Our patient had resided at Jammu\[4\] for the past 2 years and was otherwise asymptomatic with no history of comorbidities. There was no history of trauma although an insect bite or trivial trauma may go unnoticed. An atypical presentation confirmed by demonstration of LD bodies and a positive PCR confirmed the clinical suspicion. Management with standard first-line therapy with sodium stibogluconate led to acute renal injury, presumably because of his older age and longer duration of disease. Renal biopsy confirmed ATN an early recognition and institution of renal salvage therapy helped him recover from ATN. Atypical presentation of a case of CL with abscesses and a rare side effect to sodium stibogluconate led us to report this case to sensitize dermatologists of both these possibilities in leishmaniasis which are not seen too commonly in our country and may be missed as are the other variants of CL.\[9\]

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

References
1. Arora PN, Arora S. Diseases caused by parasitic worms and protozoa. In: Valia RG, Valia A, editors. Textbook of Dermatology. 3rd ed., Vol. 1. Bombay: Bhalani Publishing House; 2008. p. 432-89.
2. Sindhu PS, Ramesh V. Unusual presentation of cutaneous leishmaniasis. Indian J Dermatol 2012;57:55-7.
3. Lambertucci JR, Rayes AA, Serufo JC, Nobre V. Pyogenic abscesses and parasitic diseases. Rev Inst Med Trop Sao Paulo 2001;43:67-74.
4. Kaul N, Gupta V, Bhardwaj S, Dogra D, Dogra N. A new focus of cutaneous leishmaniasis in Jammu division of Jammu and Kashmir state, India. Indian J Dermatol Venereol Leprol 2016;82:145-50.
5. Handler MZ, Patel PA, Kapila R, Al-Qubati Y, Schwartz RA. Cutaneous and mucocutaneous leishmaniasis: Differential diagnosis, diagnosis, histopathology, and management. J Am Acad Dermatol 2015;73:911-26.
6. Ramesh V, Kumar J, Kumar D, Salotra P. A retrospective study of intravenous sodium stibogluconate alone and in combinations with allopurinol, rifampicin, and an immunomodulator in the treatment of Indian post-kala-azar dermal leishmaniasis. Indian J Dermatol Venereol Leprol 2010;76:138-44.
7. Baltzan M, Fenech F. Acute renal failure in visceral leishmaniasis treated with sodium stibogluconate. Trans R Soc Trop Med Hyg 1992;86:515-6.
8. Waring WS, Moonie A. Earlier recognition of nephrotoxicity using novel biomarkers of acute kidney injury. Clin Toxicol (Phila) 2011;49:720-8.
9. Arora S, Bal AS, Baveja S, Sood A, Rathin KR, Patil P. Atypical post kala azar dermal leishmaniasis with “muzzle area” swelling. Indian J Dermatol 2015;60:88-90.

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

Access this article online

Quick Response Code:
Website: www.e-ijd.org
DOI: 10.4103/ijd.IJD_533_16

How to cite this article: Arora S, Mendonca S, Malik A, Ramesh V, Khandpal R. Leishmanial abscess. Indian J Dermatol 2017;62:431-3.
Received: September, 2016. Accepted: May, 2017.