

## Pentazocine-induced leg ulcers and fibrous papules

Dipankar De, Sunil Dogra, Amrinder J. Kanwar

Department of Dermatology, Venereology and Leprology, Postgraduate Institute of Medical Education and Research, Chandigarh, India.

**Address for correspondence:** Dr. A. J. Kanwar, Department of Dermatology, Venereology and Leprology, Postgraduate Institute of Medical Education and Research, Chandigarh - 160 012, India. E-mail: kanwaraj@hotmail.com

### ABSTRACT

We herein describe a case of 55-year-old farmer, who presented with chronic non-healing ulcers over both shins of 4 years duration. Intravenous drug abuse was suspected due to inability to find any venous access and all peripheral veins being found thickened and fibrosed. There were multiple atrophic scars in linear distribution in all limbs as well as in both groins. In addition there were multiple discrete fibrous papules in linear distribution on both hands, which were more obvious on the left side. The patient denied abusing intravenous drugs. However, his relatives confirmed that he abused pentazocine for almost one year before his chronic pain in abdomen was treated by appendicectomy. With subsequent counseling, it was found that he continued to abuse pentazocine at times even after surgery leading to the non-healing of ulcers.

**Key Words:** Fibrous papules, Pentazocine

### INTRODUCTION

Pentazocine was introduced in 1967 as a potent 'non-narcotic, non-addicting' analgesic. By 1969, the abuse potential of pentazocine was recognized. Since 1971, when cutaneous complications of pentazocine use / abuse were recognized,<sup>[1]</sup> various cutaneous side effects have been reported. The most prominent side effect of pentazocine use / abuse is cutaneous ulcerations. We report a case who presented with leg ulcers and have fibrous papules over hand.

### CASE REPORT

A 55-year-old male farmer presented to our outpatient department with complaints of redness and swelling of the left lower limb associated with fever since three days along with painless non-healing ulcers over both the shins of four years duration. There was a history of swelling of both feet after prolonged standing. However, there was no history of dilated and tortuous veins in the lower limbs.

On cutaneous examination, there were two well defined, regular bordered, punched out ulcers of size around 5 x

5 cm with perceptible violaceous hue of the margin. The surrounding skin was hyperpigmented and indurated. In addition, there were multiple, discrete, fibrous papules in linear distribution on both hands, more obvious on the left side [Figure 1]. No venous access was found and all veins were thickened and fibrosed. There were multiple atrophic scars in linear distribution on all limbs and in both groins.



**Figure 1:** Well-defined ulcer with violaceous hue in the edge and skin colored fibrous papules along course of dorsal veins of hand in starfish pattern

**How to cite this article:** De D, Dogra S, Kanwar AJ. Pentazocine-induced leg ulcers and fibrous papules. Indian J Dermatol Venereol Leprol 2007;73:112-3.

**Received:** July 2005. **Accepted:** December, 2006. **Source of Support:** Nil. **Conflict of Interest:** None declared.

Based on these findings, we suspected intravenous drug abuse. However, he denied any such history in the past. He had used intravenous pentazocine for his abdominal pain for almost one year before it was treated with appendectomy. Subsequent counseling of the patient also revealed that he abused pentazocine occasionally even after surgery and the last injection was taken 6 weeks before admission under our care.

Laboratory investigations including complete blood counts, liver and renal function tests, urine examination, chest X-ray, color doppler ultrasound were all within normal limits. HIV serology, serum HBsAg, anti-HCV were also negative. A skin biopsy specimen from the margin of one of the ulcers showed changes of vasculitis with predominant neutrophilic infiltrate. Thin layer chromatography of urine specimen did not show any evidence of opioids including pentazocine.

He was treated with aseptic dressing for ulcers with platelet-derived growth factor and ultra-violet therapy. Psychiatric assessment and counseling was done. He discontinued pentazocine abuse and his ulcers almost completely healed after 3 months of treatment.

## DISCUSSION

Diagnosis of pentazocine-induced ulcer is easy when the history of use of pentazocine in a given patient is forthcoming. However, this is not the case in most of the patients, as they do not admit to abuse readily for fear of social stigma, alienation by family members and losing their jobs. Therefore the diagnosis requires high index of suspicion and exclusion of other commoner causes of leg ulcers, which include venous stasis ulcers, arterial ulcers, pyoderma gangrenosum, vasculitic ulcers, malignancies etc.

Previously reported pentazocine-induced ulcers had varied range of presentation which included, irregular-shaped deep ulcers with black eschars and surrounding induration,<sup>[1,2]</sup> halo of hyperpigmentation around the ulcer,<sup>[2]</sup> woody induration,<sup>[1,2]</sup> needle pricks / thrombophlebitis,<sup>[3]</sup> puffy hand syndrome,<sup>[4]</sup> fibrous myopathy,<sup>[5]</sup> discomfort disproportionately less than the extent of ulcer,<sup>[2]</sup> ulcers / nodules/ scars along the superficial veins<sup>[6]</sup> and difficulty in venous access.<sup>[6]</sup> These have been observed in patients with history of chronic pain,<sup>[1,2]</sup> iatrogenic administration of pentazocine<sup>[1,2]</sup> and patients who have ready access to restricted medicines.<sup>[1]</sup>

There is no gold standard diagnostic test for pentazocine-induced ulcers. Histopathological examination of a skin biopsy specimen shows a mixed inflammatory infiltrate with predominance of neutrophils. If subcutaneous fat is included in the biopsy specimen, neutrophilic septal panniculitis may be observed. Pentazocine can be detected qualitatively in urine by thin layer chromatography and quantitatively by gas chromatography and gas chromatography/mass spectrometry. However, a negative result does not rule out pentazocine use / abuse, as if pentazocine has not been used in the recent past, the results may be negative. Pentazocine-induced ulcers are thought to be non-respondent to conservative therapy. Surgical excision followed by skin grafting is required for early healing of ulcers. However, spontaneous healing can occur with conservative treatment.<sup>[6]</sup>

Diagnosis in our patient was not easy. Suspicion about the acquired cause of venous fibrosis was aroused when, for blood sampling, no patent peripheral venous access was obtained. Fibrous papules in linear distribution conforming to venous arch of the dorsum of hand, more so in the left hand in a right-handed person, were obvious. Though various cutaneous signs suggestive of pentazocine abuse have been described, to the best of our knowledge, starfish shaped fibrous papules along the distribution of veins in the dorsum of hand has not been described previously.

Diagnosis of pentazocine-induced ulcers requires a high index of suspicion and any ulcer, which does not fit clinically in any common cause of ulceration, should arouse suspicion of pentazocine use/ abuse.

## REFERENCES

- Schlicher JE, Zuehlke RL, Lynch PJ. Local changes at site of pentazocine injection. *Arch Dermatol* 1971;104:90-1.
- Parks DL, Perry HO, Muller SA. Cutaneous complications of pentazocine injections. *Arch Dermatol* 1971;104:231-5.
- Girolami A, Cella G. Acute superficial phlebitis in a patient with hemophilia A: Probably an iatrogenic effect. *Acta Haemat* 1972;48:307-11.
- Neviaser RJ, Butterfield W, Wieche DR. The puffy hand of drug addiction: A study of pathogenesis. *J Bone Joint Surg Am* 1972;54:629-33.
- Oh SJ, Rollins JL, Lewis I. Pentazocine induced fibrous myopathy. *J Am Med Assoc* 1975;231:271-3.
- Prasad HR, Khaitan BK, Ramam M, Sharma VK, Pandhi RK, Agarwal S, . Diagnostic clinical features of pentazocine-induced ulcers. *Int J Dermatol* 2005;44:910-5.