

Cutaneous Complications With Parenteral Pentazocine Dependence

Gaurav Bhateja, B. N. Subodh, Sandeep Grover, and Debasish Basu

Drug De-addiction & Treatment Centre, Department of Psychiatry, Postgraduate Institute of Medical Education & Research, Chandigarh, India

Corresponding author: Dr Debasish Basu, Additional Professor, Drug De-addiction & Treatment Centre, Department of Psychiatry, Postgraduate Institute of Medical Education & Research, Chandigarh 160012, India, E-mail: db_sm2002@yahoo.com

Abstract

Background: Pentazocine abuse has been associated with cutaneous complications, but reports from India are rare. *Objective:* To report a case of parenteral pentazocine dependence with a unique pattern of injection leading to an unusually large skin ulcer. *Case report:* A laboratory technician became dependent on parenteral pentazocine. Having exhausted accessible veins, he started 'blind-dating': an unusual pattern of injecting blindly into one area (thigh) though aware that most probably he would not reach the veins this way. This eventually gave rise to a large ulcer on his right thigh covering its anterior, medial and lateral aspects. Following a referral from the surgical department and his subsequent deaddiction by pharmacological and psychological means, as well as local treatment of the ulcer, the ulcer responded to treatment within a few weeks and healed by six months. *Conclusion:* Pentazocine abuse should be considered as a differential diagnosis in cases with non-healing ulcers, even when the patient does not volunteer a history of self-medication. Similarly, it is very important to look for the cutaneous complications in pentazocine dependent subjects and manage the same at the earliest (*German J Psychiatry* 2006; 9: 53-56).

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Introduction

In 1960's pentazocine was marketed as a non-narcotic analgesic. The non-opiate chemistry of pentazocine was assumed to indicate a nonaddicting drug with wide margin of safety. Shortly thereafter, reports showed that pentazocine has abuse potential and led to psychological dependence (Inciardi & Chambers, 1971; Swanson et al., 1973). Shortly, reports also began to show cutaneous complications, including pentazocine sclerosis and ulcers (Schiff & Kern, 1977; Palestine et al, 1980). Many authors tried to study the exact pathogenesis of cutaneous complications of pentazocine. It has been suggested that pentazocine is most soluble in acidic conditions and may get precipitated in the slightly alkaline pH of extracellular fluid, which then initiates a chronic inflammatory response (Schlicher et al., 1971).

Although case reports (Schiff & Kern, 1977) and case series (Palestine et al., 1980) have discussed the issues of cutaneous complications with pentazocine, there are few case reports

(Das et al., 1999) and a case series (Prasad et al., 2005) discussing the same from India, although it is one of the most common parenterally misused drugs. We present a case of pentazocine dependence with cutaneous complications and discuss the associated issues.

Case Report

R.S., a 34-year married male laboratory technician belonging to a nuclear family, with history of smoking regularly since the age of 20 years, presented with a history of injecting pentazocine for three years. To start with he used it on the advice of a colleague in the dose of 60 mg (2 ml) i.v., with which he felt relaxed. He liked the relaxing effect, and initially used the same once in 2 to 3 days. But by one month he was using 2 ml of pentazocine regularly mixed with 10 ml (4 mg) chlorpheniramine maleate, which he used to mix to increase the pleasurable effect of pentazocine. Over the next

Figure 1: Left thigh showing multiple depressed scars



6 months the quantity increased to 600 mg of pentazocine per day (20 ml) along with 40 mg (100 ml) of chlorpheniramine maleate in divided doses, because of tolerance and dyscontrol. He also started experiencing withdrawal features, starting 6 to 10 hours after the last dose in the form of body aches, restlessness, anxiety, and intense craving. He would be

also preoccupied about the drug procurement and use through out the day and as a result he was not able to work properly at his job.

By one year he started having difficulty in locating veins, as most of the veins were blocked. He would make frequent attempts to locate the vein, and many a time would not succeed in locating the same, and in desperation, would inject the combination blindly in thighs and forearms. Within a day or so of such injections, erythematous papulonodular lesions would appear at the site of deposition of injection. On spontaneous rupture over 2-3 days it would lead to painless ulcers of 1-3 cm in size. On healing, the ulcers left behind depressed scars. Although he was indifferent to these lesions, to prevent the development of new lesions and out of fear of being detected by the family members, eventually he restricted its use exclusively to his right thigh. Over the period of next 2 months, although he developed a large ulcer (10 x 15 cm) on the right thigh, he kept on injecting into the wound itself. He made many attempts to stop the drug, with and without the help of medical practitioners, but was unsuccessful. As a result the ulcer kept on increasing and involved the muscles of the anterior aspect of the thigh. He came for treatment because of the non-healing ulcer to the surgical department of the institute from where he was referred for detoxification and relapse prevention management.

There was no history of needle sharing, use of other opioids, depression, psychotic experiences, head injury, seizures, and legal complications. Family history of the patient revealed alcohol dependence in elder brother. General physical and systemic examination did not reveal any abnormality.

On local examination patient had multiple depressed scars on both the forearms, both the shins and left thigh (Figure 1). He had a large non-healing active ulcer on his right thigh measuring 40 cm x 25 cm, covering almost the entire anterior, medial and lateral aspects of the right thigh. Ulcer margins were irregular and hard with yellowish discharge. Routine investigations in the form of hemogram, blood biochemistry, X-ray chest and ECG were within normal limits. He was also found to be negative for HIV, Hepatitis-B, and syphilis. The culture of discharge from the ulcer was negative. In consultation with the plastic surgeon, he was started on daily dressing with neomycin and povidine-iodine. Gradually over the period of three weeks, the ulcer started healing and the entire ulcer had healthy granulation tissue (Figure 2).

The patient was treated for his drug dependence first by detoxification using clonidine, ketorolac and benzodiazepines. He was psychoeducated about the disorder and relapse prevention counselling was done. As his motivation kept on fluctuating he was started on motivation enhancement therapy. He was also started on naltrexone 50 mg per day as a pharmaco-prophylactic agent. His sister and brother were also included in the therapy, were psychoeducated about the disorder and need for regular pharmaco-prophylaxis under supervision. He was discharged after three weeks.

Figure 2: The ulcer on the right thigh showing the healing margins and healthy granulation tissue.



He has been coming for follow up regularly since discharge (18 months), and has been taking naltrexone with good compliance. His wound had reduced to 10 x 8 cm in size, with healthy granulation tissue. It is planned that he will undergo skin grafting for the wound.

Figure 3: The healing ulcer on the right thigh after 6 months of treatment



Discussion

This case has several interesting and important features. First, it demonstrates what may be termed as ‘blind-dating’ (as opposed to the more well-known injecting patterns of ‘mainlining’ and ‘skin-popping’): a desperate measure taken by an addict to inject himself blindly in the same area, with the awareness that the drug was most probably missing the veins anyway. Thus it was something in between a deliberate attempt at intravenous (‘mainlining’) and subcutaneous (‘skin-popping’) injection patterns. Second, this rather unusual parenteral route gave rise to a rather unusual clinical presentation in the shape of a huge non-healing ulcer, again in contrast to the usual forms described in such cases (see below). Finally, it is remarkable that despite the presenting features, the large ulcer healed up reasonably fast once further injections to the ulcer site stopped and appropriate treatment was started. This underlines the necessity, and potential success, of deaddiction treatment in such cases.

Pentazocine produces physical dependence, with withdrawal symptoms similar to though less severe than that with morphine. Cutaneous complications with pentazocine have been described in few case reports. The cutaneous complications include tense, woody fibrosis at the injection site, with peripheral extension of the fibrosis; irregular punched-out ulcerations; and a rim of hyperpigmentation surrounding the ulcer (Schiff & Kern, 1977; Palestine et al., 1980). Other rarely reported cutaneous complications of pentazocine are – bilateral deep vein thrombosis (Padilla et al., 1979), toxic epidermal necrolysis and generalized erythematous desquamative rash (Hunter & Davison, 1973), fibromyositis and contracture (Das et al., 1999).

Our case provides credence to the fact that pentazocine abuse is common in paramedical staff. It also suggests that pentazocine abuse should be considered as a differential diagnosis in cases with non-healing ulcers, even when the patient does not volunteer a history of self-medication. On the other hand, it is very important to look for the cutaneous complications in pentazocine dependent subjects and manage the same at the earliest. Figure 3 shows the wound after 6 months.

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