

## Yellow Scorpion Bite: Ignore or Take it Seriously?

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### Dear Editor,

Scorpion stings are a major public health problem in many countries. The southern areas of Iran are characterized by a warm and dry climate. Many species of scorpion are found in Iran, some of which are dangerous (1, 2). Among the different species found in this area, yellow colored scorpions are more prevalent, with the two main species being *Mesobuthus eupeus* and *Hemiscorpius lepturus* (3). Both of these species are prevalent; they are both yellow and they are approximately the same size. Distinguishing between the two species is very important because it helps to determine the appropriate treatment and prognosis following a sting. A *Mesobuthus eupeus* bite is not dangerous and it does not usually cause any complications (3), while *Hemiscorpius lepturus* venom is dangerous and may cause acute renal failure and even death if it is not properly managed (4).

Fortunately, the two species can be easily distinguished. A *Mesobuthus eupeus* bite causes severe pain, as well as a burning sensation and swelling at the bite site, while a *Hemiscorpius lepturus* bite causes little local pain, although it can produce deep and necrotic ulcers at the bite site. Envenomation by *Hemiscorpius lepturus* scorpions could easily be overlooked or underestimated because of the limited pain at the site of the bite (5). Furthermore, the two species are different in appearance, as shown in Figure 1. The dorsal part (tergum) of *Mesobuthus eupeus* features irregular black to dark brown stripes and small dark spots, while *Hemiscorpius lepturus* does not have dark spots on its tergum. Additionally, male *Hemiscorpius lepturus* scorpions have longer tails than female ones.

**Table 1.** Differentiating Characteristics of Two Common Yellow Scorpions Found in Iran, Including Their Bite Management

Anatomy	<i>Hemiscorpius lepturus</i>	<i>Mesobuthus eupeus</i>
<b>Tergum (dorsal part)</b>	Thin and long body without stripes or spots	Wide body with irregular black to dark brown stripes and small dark spots
<b>Metasoma (tail)</b>	Thin and long	Thick and short
<b>Stinger</b>	Fine and thin	Thick
<b>Pedipalp (hand)</b>	Wide hands with short, dark colored chela fingers	Oval hands with long, yellow colored chela fingers
<b>Clinical signs and symptoms</b>	Little local pain, then deep and necrotic ulcers at the bite site, hemolytic, acute tubular necrosis, hemolytic-uremic syndrome	Severe pain accompanied by a burning sensation and swelling at the site of the bite, usually no systemic complications unless in young children, the elderly, or those who are hypersensitive to the sting antigens
<b>Management</b>	Admission to hospital, anti-venom injection, hydration, observation	Local anesthesia for pain control

The emergency injection of anti-venom and admission to hospital is crucial in cases of *Hemiscorpius lepturus* envenomation, since it can cause hemolysis and, consequently, acute renal failure in the first 24 hours (6). Although there are guidelines available for health care providers regarding the management of victims of envenomation, the abovementioned points could be helpful for achieving timely and appropriate interventions.

**Figure 1.** Differing Appearances of the Two Common Yellow Scorpion Species

A, *Mesobuthus eupeus* characterized by a wide body, tail, and stinger, oval shaped hands with yellow chela fingers, and dark spots on the tergum (dorsal part); B and C, male and female *Hemiscorpius lepturus*, respectively, characterized by a thin body, tail, and stinger, wide hands with dark colored chela fingers, and without dark spots on the tergum.

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