served lesions could be caused by the *Loxosceles* spider is premature.

L. reclusa is found mainly in the south-central United States, and documented sightings of *Loxosceles* spiders in Canada are rare. These spiders may be brought into the country inadvertently in produce, motor vehicles or camping equipment, but other species may be responsible for the necrotic lesions described by the authors.

Necrotic arachnidism previously attributed to the bite of *L. reclusa* in the northwestern United States is now believed to be due to the bite of *Tegenaria agrestis* (Walckenaer), a species of spider introduced from Europe that is rapidly spreading throughout Washington, Oregon, Idaho and British Columbia.[1] *T. agrestis* bites result in necrotic lesions similar to those of *L. reclusa* and can also produce systemic reactions. Although not reported in humans, *T. agrestis* envenomation has produced petechial hemorrhages and coagulopathies in animals.[2]

The management of *T. agrestis* bites is similar to that of *Loxosceles* bites. Although experience in treating *T. agrestis* bites is limited, as is experience in treating *L. reclusa* bites, severe necrotic lesions may be prevented by the use of polymorphonuclear leukocyte inhibitors such as dapsone and colchicine.

Unless the spider has been positively identified as the one that bit the patient it would be preferable to report "brown widow (or recluse) spider bites" as cases of suspected necrotic arachnidism.

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[Drs. Smith and Baldwin reply:]

We are aware of only one identification of *T. agrestis* in British Columbia, in the Summerland (south-central) area, and we could find no mention of Canada in Ms. Willis's references. However, this spider may prove to be common in British Columbia. Dr. Roger Akre, a professor in the Department of Entomology at Washington State University, has also suggested that *T. agrestis* could be the common agent of *Loxosceles*-type bites in humans (personal communication, 1988). So far, however, the information about bites by *T. agrestis* is primarily based on circumstantial reports of bites in humans and on the results of envenomation studies in rabbits. To state that because this spider is rapidly spreading in the northwestern United States it is the causal agent of multiple severe and extensive bites in humans is speculative until we have more knowledge about the specific effects of the venom on human beings. Also, if this spider is found to such a significant extent in the northwestern United States and perhaps Canada, why have we seen relatively few apparent bites? Unlike *L. reclusa*, *T. agrestis* is aggressive, biting with little provocation when cornered or threatened.

In our article we emphasized that we were describing two cases of what we *believed* to be loxoscelism on the basis of the clinical features of the lesions (site, nature, extent, healing time etc.), which were characteristic of those in previously reported cases involving envenomation by *L. reclusa*. In addition, the patients had a high fever, nausea and vomiting, which are not usually reported as associated with presumed bites by *T. agrestis*. On the other hand, the headaches, visual complaints and hallucinations reported by many patients believed to have been bitten by *T. agrestis* were not present in our patients.

We did not decide to report our findings until we knew that a *Loxosceles* spider had been found in an apartment in Vancouver and reported by the identifying entomologist in a reputable journal. We hope that our article will stimulate additional interest in identifying the specific causal agent of these unusual ulcerating lesions.

Since submitting our article we have had direct contact with an additional three patients, all from the Vancouver area, with similar bites. Two were children, and one of the children also required extensive skin grafting on the inner thigh. In addition, we've received a number of anecdotal case reports since the widespread media publicity given to our article. Dr. Gordon R. Davies, medical director of the Royal Inland Hospital, Kamloops, BC, wrote to us that in August 1963 he presented at the 18th International Northwest Conference on Diseases in Nature Communicable to Man a case of probable necrotic arachnidism in a 54-year-old woman from Kamloops (midcentral British Columbia): after a bite a large cutaneous lesion developed that underwent necrosis and took 2 months to heal. At the time Dr. Davies suspected a *Loxosceles* bite.

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Tenfold errors in drug dosage

The inadvertent administration to children of doses of prescribed medication 10 times greater than intended, usually described in association with the successful treatment of acute intoxication, may be more frequent than has been suspected.

These errors are often due to calculation mistakes by medical or nursing staff or to misunderstanding of the prescribed dose because of unfamiliarity with the language of instruction or the usual pediatric dosages.[1-3] Up to 8% of the dosage calculations performed in a neonatal intensive care unit are erroneous,[2,3] and there are "accident-prone" personnel who tend to make mistakes more frequently than their peers.[3]

Such medication errors may also occur because of the prescribing physician's handwriting, coupled with lack of familiarity of the nursing staff with the appropriate dosage for the particular age group, as in the following two cases.

Case 1

A 9-year-old girl with a history of ulcerative colitis was admitted to hospital during an acute attack. Intravenous hydrocortisone therapy was started; the intended dose was 4 mg/kg. The corticosteroid order was written beneath the intravenous fluid order such that the "q" at the end of mEq was written between the "110" and the "mg" (Fig. 1), and the hydrocortisone dose was misinterpreted as 1100 mg (40 mg/kg). The dosage error was noticed when the first dose consumed the entire ward stock of hydrocortisone and more of the drug was requested from the hospital pharmacy. The dosage was then corrected. No adverse effects occurred.

Case 2

A 95-day-old boy with a long and "stormy" course in the neonatal intensive care unit was transferred to the intermediate care unit after erythromycin therapy, 40 mg/kg per day, had been started. As part of the usual transfer procedure his orders were rewritten. The erythromycin order was written on line 6, beneath the order for a routine complete blood count, such that the "y" of "Monday" projected from line 5 to the base of line 6 (Fig. 2). The dose was misinterpreted, and the child received 180 mg (400 mg/kg per day) every 8 hours for 2 days before the error was noted. The erythromycin therapy was then stopped. The child had no adverse effects of the overdose.

Suggestions for reducing the incidence of 10-fold errors in pediatric drug administration have included the use of written tests for certification of all personnel involved in drug dosage preparation and administration, the routine double-checking of medications with a narrow therapeutic index before their administration, the abolition of decimal points on order sheets and the routine use of printed sheets of pediatric dosages.[1,4,5] Our two cases suggest that physicians should take care after writing drug dosages on order sheets to review the orders, and they reinforce the need for educating ward personnel in appropriate pediatric dosages to avoid misinterpretation.

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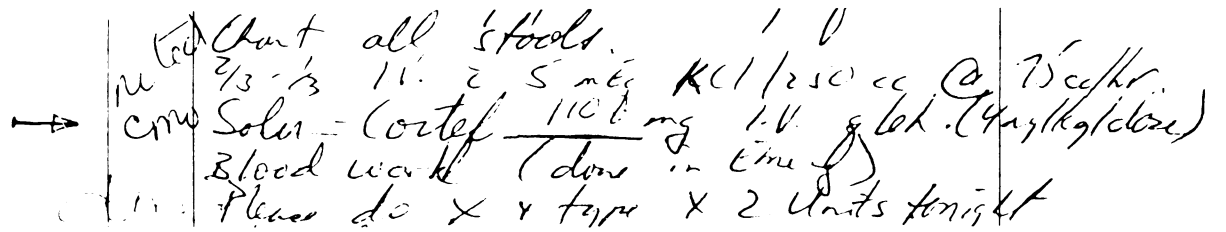

Fig. 1 — Order for 110 mg of hydrocortisone, misinterpreted as 1100 mg (arrow).

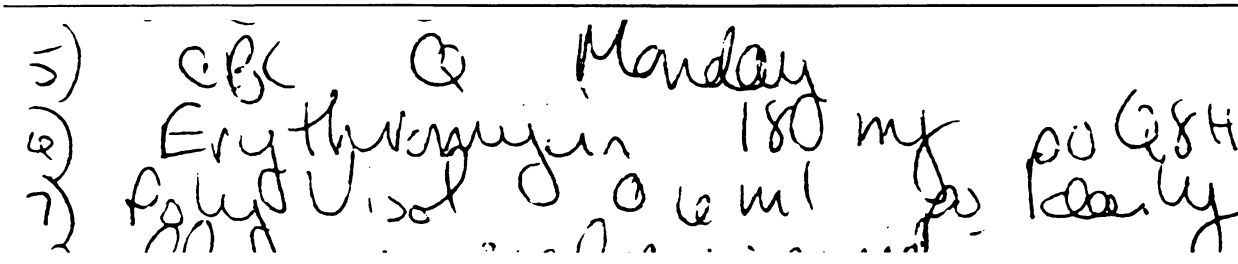

Fig. 2 — Order for 18 mg of erythromycin, misinterpreted as 180 mg (line 6).