Spiders that are capable of causing significant harm to humans are classified as “poisonous.” The most common poisonous spiders include widows (Latrodectus) and recluse (Loxosceles reclusa) in North America. Funnel web (Hadronyche) and redback (Latrodectus hasselti, similar to the black widow) spiders in Australia and wandering spiders (Phoneutria) in Brazil are also known to cause significant human harm. Other spiders that do not have neurotoxic, necrotizing, or lethal venom or those unable to puncture human skin are considered “nonpoisonous.”

The largest prospective cohort study evaluating the outcome of spider bites was conducted in Australia. The inclusion criteria required that the bite was witnessed and that the spider was collected for identification. Of 1,474 patients referred with spider bites, 750 had collected the offending spiders. Identification of all spiders was performed by an expert arachnologist. Both poisonous and nonpoisonous bites were evaluated. Most bites occurred on distal upper and lower extremities (49%), followed by the proximal extremities (27%), trunk (16%), and head (7%). Latrodectus caused 82 (10.8%) and Hadronyche caused 8 (1.1%) of bites.

Of the poisonous bites caused by redbacks, 66% had pain longer than 24 hours. For nonpoisonous bites, pain was the most prominent symptom, which generally resolved within 5 to 60 minutes of bite. There were no necrotic lesions or ulcers, early allergic reactions, or fatalities seen from any of the identified spider bites. The incidence of secondary infections was low (0.9%).

Experts state that care for nontoxic spider bites includes thorough wound rinsing with soap and water, ice to reduce inflammation, and patient reassurance. Other optional measures include topical/systemic analgesics, calamine lotion, antihistamines (Benadryl®), and zinc oxide solution. Antibiotics are not recommended unless secondary infection is evident. A tetanus vaccine booster should be given if the patient’s tetanus vaccine is not up to date.

Evidence-Based Answer

Initial management steps for nonpoisonous spider bites include thoroughly rinsing the affected area with soap and water, followed by the application of ice to reduce inflammation. Other optional measures include analgesic agents, antihistamines, calamine lotion, zinc oxide, and a tetanus vaccine booster if the patient is not up to date. (SOR C, based on expert opinion.)

What is the best treatment for a nonpoisonous spider bite?

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What is the most effective treatment for Bell’s palsy among patients with diabetes?

Evidence-Based Answer

Patients with Bell’s palsy have higher cure rates when treated with oral prednisolone within 72 hours of onset (SOR B, based on a single randomized controlled trial), but it is unclear what effect this therapy would have on patients with diabetes. Intravenous lipo-prostaglandin E1 (lipo-PGE1) may be an alternative to steroid therapy for Bell’s palsy that does not effect blood glucose levels. (SOR C, based on a single small cohort study.)

A 2007 randomized, double-blind, placebo-controlled trial of 496 patients with Bell’s palsy less than 72 hours from onset compared prednisolone, acyclovir, both prednisolone and acyclovir, or placebo over a 9-month period. Treatment lasted 10 days and the primary endpoint was recovery of facial function.
At 3 months, 83% of patients in the prednisolone group had complete recovery compared with 63.6% among patients who did not receive prednisolone (P<.001). Complete recovery of facial function among patients in the acyclovir group did differ significantly from patients who did not receive acyclovir (71.2% vs 75.7%; unadjusted P=.30; adjusted P=.50). At 9 months complete recovery was 94.4% in the prednisolone group compared with 81.6% for no prednisolone (P<.001). The acyclovir group had a complete recovery rate of 85.4% compared with 90.8% for no acyclovir (unadjusted P=.07; adjusted P=.10). For the group taking double placebo, complete recovery was 64.7% at 3 months and 85.2% at 9 months. There was no additional benefit of adding acyclovir to prednisolone. The number needed to treat with prednisolone for 1 additional complete recovery was 6 (95% CI, 4–9) at 3 months and 8 (95% CI, 6–14) at 9 months. The authors concluded that the best treatment for patients presenting with Bell’s palsy was prednisolone within 72 hours of symptom onset.1

A 9-year cohort study of 31 patients with Bell’s palsy and diabetes compared intravenous (IV) steroid therapy with IV lipo-PGE1 therapy. The first 3 patients were given steroids, but subsequent patients were sequentially allocated between the 2 groups. The patients were followed for up to 6 months. The steroid group (n=17) was treated with a 7-day taper of IV hydrocortisone sodium succinate. The other group (n=14) was treated with IV lipo-PGE1, 10 µg/d for 10 days.2

Four weeks after the first visit, the recovery rates were 47% for the steroid group and 43% for lipo-PGE1 groups. After 2 months, the figures were 65% and 71%, respectively, and after 6 months, they were 76% and 79%. There was no statistical difference at any interval of the recovery rates. Fasting glucose levels in the steroid group increased to a mean peak value of 291 mg/dL. The lipo-PGE1 group did not have any increase in their fasting blood glucose levels.2

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What is the best treatment for Graves’ disease in women trying to become pregnant?

Evidence-Based Answer

No studies or guidelines directly address this question. However, it is recommended that pregnant women with Graves’ disease and thyroid-stimulating hormone (TSH) antibodies be treated with an antithyroid drug, whereas those without TSH antibodies should simply be observed. Radioiodine treatment with iodine-131 (I-131) is contraindicated when a woman is attempting pregnancy and during pregnancy. Propylthiouracil (PTU) is the first-line drug therapy during the first trimester. (SOR B, from an evidence-based guideline.)

The Endocrine Society Clinical Practice (ESCP) guideline on the management of thyroid disease in pregnancy was compiled by a panel of experts from the Americas and Europe.1 Available literature from the last 20 years was analyzed and clinical recommendations were graded with a taxonomy similar to the one used by the US Preventive Services Task Force (A, B, C, D, and I).

The ESCP made the following recommendations for women who are pregnant or postpartum with thyroid dysfunction, based on their literature review:

- Antithyroid drug therapy should be initiated and/or adjusted to maintain maternal free T4 levels in the upper nonpregnant reference range, in patients with antithyroid antibodies. (ESCP A, good)
- PTU is the first-line drug, especially during the first trimester. (ESCP B, fair)
- Thyroid receptor antibodies (TRAb) should be measured during the second trimester in mothers with Graves’ or a history of Graves’, including women with previous treatment of I-131 or a thyroidectomy. A patient with a negative TRAb result requires no antithyroid drug therapy, as the risk of fetal thyroid destruction is low. (ESCP B, fair)
- I-131 should not be given to pregnant women. If iodine radiation treatment occurs, warning of potential damage should be discussed. (ESCP A, good)
- If a patient has elevated TRAb or is currently being treated with an antithyroid drug, an ultrasound should be ordered to look for evidence of fetal thyroid destruction: growth restriction, hydrops, goiter, or advanced bone age. (ESCP B, fair)