



PIC QUESTION OF THE WEEK: 4/03/06

Q: Does *Spanish Fly* have any documented medicinal use?

A: Cantharidin is the active principle of cantharides, the dried remains of the blister beetle, *Cantharis vesicatoria* (otherwise known as “Spanish fly.”) Despite risk of toxicity, cantharides has been used for centuries as an aphrodisiac and rubefacient. Cantharidin is prescribed today as a keratolytic for the treatment of molluscum contagiosum (MC) and several types of warts including plantar, periungual, and palpebral varieties. MC is a cutaneous viral infection caused by a poxvirus. Infections are characterized by discrete, flat-topped, flesh-colored lesions, usually containing a centralized white core. A common infection in children, the virus is spread by direct contact. Lesions generally occur on the face, trunk, and extremities. Infections are most common in children ages 2-12 years. MC is typically spread in adults as a sexually transmitted disease with lesions located on the groin and genitalia. Physical destruction of the lesions using liquid nitrogen cryotherapy has been successful, although it is fairly painful and not well tolerated by children. Chemical treatments may be preferable in children and include imiquimod or tretinoin cream, salicylic/lactic acid, podophyllin, and cantharidin. Cantharidin has been shown to be highly effective in treating MC lesions and can decrease further spread of the virus. There have been concerns about potential adverse effects including blistering and risk of secondary infection. In 1970 the FDA issued a statement indicating “the hazards associated with the use of cantharidin outweigh any benefits to be derived from its medicinal use.” Because of this, health care professionals became hesitant to initiate this form of treatment. Additional studies supported its efficacy and renewed interest in its therapeutic potential. A 1998 poll of pediatric dermatologists concluded that 45% were using cantharidin for children with MC involving the trunk. In 1998, the Pharmacy Compounding Advisory Committee of the FDA recommended inclusion of cantharidin as a compounded medication to be used by physicians in the office. A subsequent retrospective study of 300 children with MC revealed that 98% of patients cleared or showed significant improvement. The most commonly used preparation is a 0.7% concentration in flexible collodion. Application may be repeated at two-four week intervals. Cantharidin still appears to play a role in the treatment of some conditions, especially MC.

References:

- Griffith's 5-Minute Consult. Molluscum contagiosum. (accessed 27 March 2006).
- Silverberg N, Sidbury R, Mancini AJ. Childhood molluscum contagiosum: experience with cantharidin therapy in 300 patients. *J Am Acad Dermatol* 2000;43:503-7.

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