

*EDITORIAL***THE YEAR OF THE SNAKE – AND THE LYMPHATIC SYSTEM**

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On February 10, 2013, the Chinese Lunar New Year begins with a new animal symbol – the Snake. Not only is the alluring and dangerous serpent legendary across many cultures – including in the start of Man’s sins in the Garden of Eden – but its bite represents a serious health problem in many parts of the world. Not all snakes are alike, and their venoms and other products differ widely. Just as the lore about snakes and their symbolism is shrouded in mystery and ambivalence, so, too, are the benefits and illnesses they produce (or don’t) in man and other animal species and their treatment. On the one hand, fascination with the healing power of snakes and health claims for “snake oils” explain their use as symbols for the healing profession(s) – both in the non-venomous single serpent-entwined Rod of Asclepius, a Greek deity associated with healing, and the more “commercial” Caduceus with its two intertwining snakes often with wings, associated with the god Mercury or Hermes. On the other hand, the deadly, torturous bites of some of the most stunningly “beautiful” (1) of their family remind us not to be seduced by their charms.

Snakes, venoms, and antivenoms are also intertwined with the lymphatic system. As early as the 1940’s, Barnes and Trueta (2) observed that snake venoms differ by their

molecular weight components, which also relates to local and systemic manifestations after envenomation. Accordingly, he proposed that the lymphatic system – primarily responsible for the absorption of large molecules and particles from interstitial tissues – had to be an important route of entry for specific venoms into the bloodstream. Subsequently, Dumont and Witte (3) further suggested that thoracic duct lymph drainage might be a potential early treatment for bites from snakes that produce high molecular weight venom components and also as an approach to diverting venoms from other “critters” as well as toxins of various types.

In this issue of *Lymphology*, Paniagua et al (4) provide the first direct evidence of major lymphatic transport of venom – specifically from the coral snake – from the envenomation site to regional lymph nodes and the thoracic duct and from there, into the central blood stream. It is reasonable that the lymph pool is likely continuing to deliver venom for much longer than the 6- hour observation period. This thoracic duct lymph venom delivery may even be an under-estimation because lymph may be diverted or enter through other lymphatic channels before the central thoracic duct-venous junction, may be captured or delayed in regional lymph nodes, and some lower molecular weight components of the venom, which may enter the bloodstream directly, are included in the specific immunoassay.

Furthermore, lymph, lymphatics, lymphocytes, and lymph nodes comprise the integrated lymphatic system, and venom may exert its effects on these other components and their interactions with other body systems.

Let us hope that the resurgence of interest of toxinologists, lymphologists, and other scientists and “healers” from around the world in the global health problem of envenomation is just the beginning and will be sustained well beyond the closing of the Year of the Snake!

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