



# PHYSICIANS' BULLETIN

Robert K. Ross, M.D., Health Officer

June 1994

NO. 389

## Arthropod-Related Health Issues Are Annual Concern

Arthropod-related health issues are a concern each year in this county, especially as residents and visitors spend more time outdoors during the warmer months. This annual issue of the *Physicians' Bulletin* addresses the important role physicians have in identifying and addressing these issues.

### Hybridized (Africanized) Honey Bees

Hybridized honey bees are expected to arrive in this county sometime this year. The bees can be very aggressive when provoked, and persons attacked are likely to receive many more stings and thus, more venom, than from the European honey bees currently in the county. Persons with a hypersensitivity to bee stings may experience an anaphylactic reaction. Consideration of immunotherapy is recommended.

Medical care providers should immediately report by telephone multiple bee sting incidents (15 or more stings) as required by law. For the reporting procedure, see the end of this issue.

### Encephalitis

Symptoms - Mild cases of this mosquito-borne disease occur as viral meningitis; severe infections usually have acute onset of headache, high fever, meningeal signs, stupor, disorientation, coma, tremors, occasionally convulsions in infants, coma, and spastic but rarely flaccid paralysis.

**Laboratory** - Physicians are strongly encouraged to submit blood specimens on suspect cases of meningoencephalitis. The usual procedure in viral serologic tests is to hold the acute phase serum specimen until the convalescent specimen is collected and then submit them as a pair for testing to demonstrate a rise in antibody levels. If arboviral encephalitis is part of the differential diagnosis, however, the acute phase specimen should be submitted without delay for testing to detect IgM antibodies to St. Louis encephalitis (SLE) or western equine encephalitis (WEE). The initial serum usually has IgM antibodies that can be readily identified by the indirect immunofluorescent antibody (IFA) test.

Specimens may be sent to the County of San Diego Public Health Laboratory, 3851 Rosecrans St., P.O. Box 85222, San Diego, CA 92186-5222. For further information and/or delivery instructions, call 692-8500. Please submit 6-8 ml. whole clotted blood or 3-4 ml. serum from each phase. Specimens should be accompanied by a County Public Health Laboratory Form 22.

### Malaria

**Symptoms** - Symptoms of this mosquito-borne disease include shaking chills, high fever, sweats and headache. Because of the cyclic nature of this disease, persons with mild symptoms should return when symptoms intensify and the parasite, which is not evident in the blood during mild symptoms, is once again present.

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**Laboratory** - If malaria is suspected, a thick and thin smear of peripheral blood should be obtained and examined for the presence of malaria parasites. The blood should be collected prior to therapy.

Optimal results are obtained with blood collected during spikes of fever and with smears prepared from freshly collected uncoagulated blood. The smears and the blood (in purple top tubes with EDTA anticoagulant) may be sent to the Public Health Laboratory (see directions above).

### **Lyme Disease**

**Symptoms** - Early symptoms of this tick-borne disease may include a skin lesion, frequently, but not always, annular (*erythema migrans* - EM), accompanied by flu-like symptoms, fever and aches. Long-term complications may include disorders of the heart or nervous system, and arthritis.

**Laboratory** - Since laboratory tests for Lyme disease vary in accuracy, they should not be relied upon to make a final diagnosis. The patient should be treated based on clinical observations. Serological tests are widely available, but their sensitivity and specificity are unclear, and they are not standardized.

Ticks should be saved, if possible, and may be sent to County Vector Control for identification. Call 694-2888 for further directions. The Public Health Laboratory performs both the IFA test and a culture on the primary vector for Lyme disease, *Ixodes pacificus* or Western Black-Legged tick, for a fee. Physicians requesting this service should call the Laboratory for instructions. Only those ticks identified as *Ixodes pacificus* will be tested by the Public Health Laboratory per the submitting physician's request. Ticks must be viable and kept in a moist environment.

### **Plague**

Plague has been documented in San Diego County in wild animals. Patients should be queried about possible exposure to fleas and/or their wild animal

hosts in rural areas if symptomatology is consistent with the following.

**Symptoms** - The initial symptom is lymphadenitis in nodes of the inguinal, axillary or cervical area. The involved nodes are swollen and tender and may suppurate. Fever is often present.

**Laboratory** - For directions on collection and submission of appropriate specimens, call the Public Health Laboratory at 692-8500.

### **Tularemia**

Tularemia has also been documented among wild animals in San Diego County. Exposure most often occurs during skinning/dressing or performing necropsies on rabbits, hares and other wild animals; through bites of infected deerflies, ticks and other arthropods; and by drinking contaminated water.

**Symptoms** - The primary symptom is one or more enlarged lymph nodes which may be accompanied by an indolent ulcer on the hand.

**Laboratory** - For directions on collection and submission of appropriate specimens, call the Public Health Laboratory at 692-8500.

### **Reporting**

Prompt reporting by telephone of multiple bee sting incidents or suspected malaria, plague, tularemia or encephalitis cases is important. Call 236-3598, the Epidemiology Unit, weekdays between 8 a.m. and 5 p.m. On nights and weekends, call 565-5255, the County's communications center. The caller's name and telephone number will be taken and a Public Health staff person will return the call as soon as possible.

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