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Rabies Prophylaxis: Guidelines for the Administration of Rabies Prophylaxis

Post-exposure rabies prophylaxis has included local wound treatment, active immunization with rabies vaccine and passive immunization with equine anti-rabies serum or human rabies immune globulin. **Duck embryo vaccine** is the only currently licensed vaccine available in the United States. Major complications associated with duck embryo vaccine in post-exposure prophylaxis are uncommon. However, local reactions such as pain, erythema and pruritus at the site of inoculation are frequent. In addition, systemic symptoms such as fever, malaise, myalgia occur in about one-third of patients who receive the vaccine. Anaphylaxis is rare and usually occurs during the administration of the first five doses. It has been reported in persons sensitized with other vaccines containing avian tissue, and consequently, a history of hypersensitivity to avian products should be ruled out before therapy. Other rare side effects have included central nervous system reactions.

Because of the side effects from duck embryo vaccine, the risk of rabies must be clearly established before treatment is justified. When a reaction does occur, antihistamines will usually ameliorate local and systemic reactions to the duck embryo vaccine. Steroids interfere with the development of active immunity and they increase the likelihood of the development of clinical rabies and, therefore, should not be used in treating adverse reactions unless life-threatening complications to the vaccine occur.

There are two types of passive immunizations available. Until recently, the only available preparation of hyperimmune serum was anti-rabies serum of equine origin. While effective, **horse serum** produces serum sickness in approximately 15% of children and up to 40% of adults.

A **human hyperimmune rabies globulin** has recently been obtained from human volunteers. This product will eliminate serum sickness from passive immunizations. While not readily available at first, human hyperimmune rabies globulin is now available in quantities sufficient for all persons requiring serum and vaccine for post-exposure prophylaxis. It is recommended that human rabies immune globulin be used when passive immunization is indicated and that equine hyperimmune serum no longer be administered unless circumstances prevent obtaining human rabies immune globulin. The recommended dose of human rabies immune globulin is 20 IU/Kg. Up to 50% of the antiserum should be used to infiltrate the wound and the rest should be administered intramuscularly.

The State of Alaska Department of Health and Social Services will institute the following policies until such time as legislative statutes and/or regulations can be instituted:

1. The Alaska State Health Department will maintain a stockpile of human rabies immune globulin in each of the regional laboratories in Fairbanks, Anchorage and Juneau. Five 10 cc. vials will be kept on hand in Anchorage and Fairbanks. Two 10 cc. vials will be kept on hand in Juneau.
2. Human rabies immune globulin will be supplied when circumstances dictate its use, consistent with recommendations of the Center for Disease Control, Atlanta, Georgia.