



DEPARTMENT OF THE NAVY

U.S. NAVAL HOSPITAL

PSC 482

FPO AP 96362-1600

USNAVHOSP OKINAWAINST 6310.3C
065
04 OCT 02

USNAVHOSP OKINAWA INSTRUCTION 6310.3C

From: Commanding Officer

Subj: PROCEDURES FOR HANDLING ANIMAL AND SNAKE BITES

Ref: (a) ACIP Rabies Postexposure Prophylaxis Recommendations
from MMWR Vol. 48, No. RR-1, 8 Jan 99
(b) NAVMEDCOMINST 6220.4
(c) SECNAVINST 6401.1A
(d) BUMEDINST 6220.12A

Encl: (1) DD Form 2341 Report of Animal Bites
(2) Identification, Symptoms and Treatment of the Habu
Snake Bite

1. Purpose. To establish responsibilities and outline the procedures to be followed in the management and treatment of animal and snake bite cases. In addition, this instruction provides local guidance in the prevention of rabies in humans and augments references (a) through (c). Reference (d) provides guidance for the submission of Medical Event Reports.

2. Cancellation. USNAVHOSP OKINAWAINST 6310.3B

3. Background. There have been no reported cases of rabies on Okinawa for over 20 years. However, animal vaccination and quarantine safeguards could fail and rabies could gain entry to Okinawa. In addition, many cases of animal bites occur while individuals are traveling in foreign countries. In addition to rabies other diseases resulting from animal bites include pasteurellosis from cat and dog bites; simian B disease from monkey bites; encephalitis, especially due to rhabdoviruses (other than rabies) such as duvenhage virus; tularemia; rat-bite fever; cat-scratch fever; plague and tetanus. Also, pyogenic infections often develop at bite sites. Thus, all bites and scratches inflicted by mammals should be dealt with seriously, including assessment of the risk of rabies transmission and

appropriate treatment and documentation. Additionally, snake bites need to be handled in an expedient manner and should be assessed immediately for appropriate medical care and possible administration of anti-venom.

4. Responsibilities

a. The Emergency Department (ED) will:

(1) Treat bite wound(s):

(a) Treatment of bites of potentially rabid animals will be administered per reference (a), treatment protocols will be maintained as part of the ED Standard Operating Procedures. A current copy of reference (a) may be obtained from the Preventive Medicine Department (PMD). Rabies prophylaxis procedures were intended for the Contiguous United States (CONUS) where animal rabies is endemic. Due consideration should be given that Okinawa is, at present, rabies-free and treatment for rabies would be warranted only under very extenuating circumstances.

(b) Before administration of rabies prophylaxis, the U.S. Army Veterinary Services veterinarian on call should be contacted to assist in assessing rabies risk. During normal working hours call 634-2140/0705, after normal working hours contact the veterinarian on call at cellular phone number 090-3792-1010 (Veterinary Technician) or 090-3792-1099 (Veterinarian).

(c) Snake bites should be handled in accordance with enclosure (2). If the snake is brought to the ED, the PMD should be contacted to identify it. After normal working hours, the duty Preventive Medicine watchstander should be contacted via the Officer of the Day (OOD).

(2) Ensure that the bite history and wound treatment is accurately documented on the Emergency Care and Treatment Record (ETR) as well as Parts I and II of DD Form 2341, Report of Animal Bites, enclosure (1). When the information requested is not known or unavailable, an entry of "NA" should be made. No block should be left blank. The attending Medical Officer (MO) shall personally complete and sign Part II "Management of Animal Bite Case" of enclosure (1).

(3) Notify the installation security forces for the apprehension of stray and unsupervised animals and the U.S. Army

Veterinary Service to assess the potential for rabies transmission.

(4) Place the original copy of enclosure (1) and a copy of the ETR in the PMD box located in ED.

b. Branch Medical Clinics will follow the procedures outlined above and will fax a copy of the completed DD Form 2341 to PMD at 643-7812 whenever an animal bite incident occurs. In addition, the original DD Form 2341 and a copy of the ETR must be sent to the Preventive Medicine Department.

c. Preventative Medicine Department will:

(1) Collect DD Form 2341s from the ED every working day.

(2) Assign a tracking number to the animal bite report and log the report on a tracking roster.

(3) Review the animal bite report for completeness and fax a copy to the Veterinary Services within one working day of the bite incident.

(4) Forward the original copy of the animal bite report to the Veterinary Services for formal documentation. The Veterinary Services will return the completed document to the PMD.

(5) Upon receipt of a completed DD Form 2341 from the Veterinary Services, file it in the patient's health record or forward it to the clinic holding the patient's health record for filing.

(6) Perform quality assurance reviews of all DD Form 2341s on a monthly basis to ensure compliance with references (b) and (c).

(7) For each animal bite case where rabies prophylaxis is recommended, ensure the patient completes the prescribed prophylaxis and treatment and that a Medical Event Report is prepared and submitted per reference (d).

(8) Ensure that the Rabies Control Board convenes annually to evaluate local procedures and assess the clinical management of animal bite cases per reference (b).

d. Army Veterinary Services personnel provide the following services in support of the Animal Bite Program:

(1) On call advice in assessing risk of rabies.

(2) When notified by the PMD, the Veterinary Services contacts the animal owner, if known, and determines vaccination status and quarantine examination, if necessary.

(3) If an animal is not located within 72 hours, the veterinarian will contact the PMD to discuss post-exposure prophylaxis.

(4) Complete Part III of DD Form 2341 and return the form to the PMD when vaccination status of the animal is verified or quarantine is completed or the disposition is otherwise noted after 10 days from the bite incident.

(5) If, during a quarantine, the animal dies, escapes, or exhibits clinical signs suggestive of rabies, the veterinarian immediately contacts the Head, ED and the Head, PMD.

5. Forms Availability. Enclosure (1) can be ordered through the Direct Turnover Office, Materiel Management Department (MMD). Enclosure (2) is available through the PMD.

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M. H. MITTELMAN

Distribution:
List I

REPORT OF ANIMAL BITE - POTENTIAL RABIES EXPOSURE <i>(Please read Privacy Act Statement on back before completing this form.)</i>					SEQUENCE NUMBER	
1. FROM (Medical Treatment Facility)		2. THRU (Deputy Commander for Veterinary Services)		3. TO (Chief, Preventive Medicine)		
PART I - ANIMAL BITE HISTORY (To be completed by Emergency Room Interviewer)						
4. DESCRIPTION OF ANIMAL					5. TIME OF ATTACK	
a. TYPE (Dog, cat, etc.)	b. BREED	c. SIZE	d. COLOR	e. SEX	a. DATE	b. HOUR
6. PRESENT LOCATION OF ANIMAL OR GEOGRAPHIC ADDRESS WHERE ATTACKED <input type="checkbox"/> ON POST <input type="checkbox"/> OFF POST						
7. CIRCUMSTANCES LEADING TO BITE / SCRATCH INCIDENT						
8. APPARENT HEALTH OF ANIMAL (Unusual Behavior)						
9. OWNER						
a. NAME (Last, First, Middle Initial)		b. STATUS (X one)	c. PHONE NUMBER (Include Area Code)	d. ADDRESS (Street, City, State, Zip Code)		
		MILITARY				
		CIVILIAN				
10. RABIES VACCINATION						
a. VACCINATION STATUS OF ANIMAL		b. YEAR ANIMAL VACCINATED	c. TYPE VACCINE (If known)			
11. PREPARED BY						
a. NAME (Last, First, Middle Initial)			b. TITLE			
c. SIGNATURE			d. DEPARTMENT / SERVICE / CLINIC		e. DATE PREPARED	
PART II - MANAGEMENT OF ANIMAL BITE CASE (To be completed by Medical Officer (Information from SF 600))						
12. DESCRIPTION OF INJURY AND LOCATION ON THE BODY						
13. DIAGNOSIS (Injury) (X, as applicable)				14. RABIES RISK ESTIMATE (X one)		
<input type="checkbox"/> ANIMAL BITE	<input type="checkbox"/> CLAW WOUND	<input type="checkbox"/> OTHER	<input type="checkbox"/> MINIMAL	<input type="checkbox"/> MODERATE	<input type="checkbox"/> HIGH RISK	
15. INITIAL TREATMENT GIVEN		a. TIME	b. DATE	16. RECOMMENDED FURTHER PROPHYLACTIC TREATMENT		
c. DEEP FLUSHING AND CLEANSING WITH SOAP AND WATER				a. NONE		
d. TETANUS TOXOID (List dose given)				b. *HUMAN RABIES IMMUNE GLOBULIN		
e. OTHER (Specify)				c. HUMAN DIPLOID CELL RABIES VACCINE		
				d. COUNSELED ON DF2 HAZARD		
				e. OTHER (Specify)		
				*Need to consult Rabies Board prior to treatment		
17. PATIENT'S IDENTIFICATION (ID impression, if available.) (For typed or written entries give name (Last, First, Middle Initial); pay grade; SSN; unit; phone; date; hospital or medical facility.)				18. PHYSICIAN		
LAST, FIRST MI:				a. NAME (Last, First, Middle Initial)		
GRADE/RANK:				b. SIGNATURE		
FMP/SSN:				19.a. DISCUSSED WITH AREA VETERINARIAN (X one)	YES	NO
UNIT:				b. NAME OF VETERINARIAN (Last, First, Middle Initial)		
DUTY PH#:				HOME PH#:	20. VERBAL REPORT TO (1) NAME (2) PHONE NO.	
				a. VETERINARIAN		
				b. POLICE		
				c. OTHER		

PRIVACY ACT STATEMENT					
AUTHORITY: Title 10, United States Code, Sections 3013, 5013, and 8013.					
PRINCIPAL PURPOSE(S): Used by medical authorities to record the history, examination, and treatment of a person who has possibly been exposed to rabies; and to record the follow-up medical care provided to the individual who was either bitten or scratched. Used by veterinarians to locate the animal, record examination, observations, and disposition results, and possible laboratory findings for the animal.					
ROUTINE USE(S): Information will be used as a basis for documenting the proper treatment and care of individuals who have potentially been exposed to rabies. The information will be used to locate the animal, and record the vaccination and physical status of the involved animal. The information may also be used to: aid in preventive health and communicable disease control programs; report medical conditions required by law to Federal, state and local agencies; compile statistical data; conduct research; teach; assist in law enforcement, to include investigation and litigation; and to evaluate the care provided.					
DISCLOSURE: Voluntary; however, if the information is not provided, it will delay the compilation of the data required for record keeping purposes.					
PART III - MANAGEMENT OF BITING ANIMAL (To be completed by Veterinarian)					
21. AUTHORITIES NOTIFIED					
a. NAME (Last, First, Middle Initial)	b. DATE	c. TIME	d. INITIALS	e. FOLLOW-UP	
				(1) DATE	(2) TIME
22. INITIAL ACTION			23. EMERGENCY ROOM NOTIFIED		
			a. TIME	b. DATE	c. INITIALS
24. LOCATION OF ANIMAL DURING OBSERVATION PERIOD (On or off post, list point of contact if not veterinary activity)					
25. OBSERVED BY (Include name of military or civilian agency)					
26. DATES OBSERVED					
a. FROM			b. TO		
27. DATE ANIMAL RELEASED					
28. CONDITION OF ANIMAL DURING AND AT THE END OF 10-DAY QUARANTINE					
29. OTHER DISPOSITION OF ANIMAL (Explain fully - died, escaped, not located, etc.)					
30. LABORATORY FINDINGS OF ANIMAL SUBMITTED FOR RABIES DIAGNOSIS					
a. TEST (X one)		b. DATE RECEIVED		c. RESULTS (X one)	
(1) FLUORESCENT ANTIBODY				NEGATIVE	POSITIVE
(2) CELL CULTURE				NEGATIVE	POSITIVE
31. INFORMATION REPORTED TO RABIES BOARD BY					
a. NAME (Last, First, Middle Initial)		b. SIGNATURE		c. DATE SIGNED	
32. VETERINARY OFFICER					
a. NAME (Last, First, Middle Initial)		b. SIGNATURE		c. DATE SIGNED	
PART IV - RABIES ADVISORY TEAM ACTION / BOARD REVIEW					
33. DISCUSSED BY (List names of members of team or board, or X box at right.) <input type="checkbox"/> NOT REQUIRED TO MEET					
34. RECOMMENDATIONS					
a. HUMAN RABIES IMMUNE SERUM (X one)		LOCAL	SYSTEMIC	BOTH	
b. VACCINE					
c. OTHER					
35. CHIEF, PREVENTIVE MEDICINE					
a. NAME (Last, First, Middle Initial)		b. SIGNATURE		c. DATE SIGNED	
36. FINAL DISPOSITION OF CASE (Review by rabies board)					
37. PRESIDENT OR SENIOR MEDICAL OFFICER OF BOARD					
a. SIGNATURE				b. DATE SIGNED	

IDENTIFICATION, SYMPTOMS, AND TREATMENT OF THE HABU SNAKE BITE

1. Purpose. To establish a guideline for medical providers in treating victims of the Habu snake bite.

2. Identification

a. There are 21 species of snakes in the Okinawa Prefecture.

b. Four of these 21 snakes are venomous:

(1) Okinawa Habu (Trimeresurus flavoviridis)

(2) Hime Habu (Trimeresurus okinavenis boulenger)

(3) Sakishima-Habu (Trimeresurus elegans)

(4) Taiwanese Habu (Trimeresurus mucrosquamatus)

c. The Preventive Medicine Department (PMD) should be notified for assistance in identification of any snake brought to the Emergency Department (ED). Phone #643-7808 during normal working hours. After normal working hours page the Preventive Medicine Duty Officer.

d. The Habu can be identified by:

(1) Color. Yellow-green color with dark blotches that alternate on the back.

(2) Shape. Long and slender, with a triangular shaped head.

(3) Slough (skin). The head is covered with small scales where all non-poisonous snakes have larger scales.

(4) Size. The Okinawa Habu is usually not less than 30 centimeters long but can be greater than 180 centimeters.

(5) Elliptical pupils (vertical pupils).

(6) Pit organ located behind the nose for heat detection.

e. Characteristics of Habu snake venom:

(1) Yellow viscid liquid.

(2) Main component is protein.

(3) Has enzymatic actions.

(4) Necrotoxin.

(5) Approximately 0.1cc of venom is injected during a single Habu bite.

3. Symptoms of the Habu snake bite

a. Paralyzing, throbbing pain.

b. Marks of the fangs with blood oozing from site.

c. Marked edema. If no edema is present within 10 minutes after the bite, either no venom was injected or the snake was not venomous

d. Ecchymosis caused by internal tissue hemorrhage.

e. For large amounts of injected venom the victim may have:

(1) Hypotension

(2) Nausea and vomiting

(3) Hematuria

(4) Dyspnea

(5) Disorientation

f. Precautions should be taken for airway compromise due to edema if the victim was bitten on the neck or shoulder.

4. Patient Evaluation Procedures

a. Quickly evaluate the ABCs (airway, breathing, circulation) and vital signs.

b. Oxygen may be given for dyspnea, 5-10 liters per nasal cannula or mask.

c. Place on the cardiac monitor.

d. Start a large bore IV and infuse lactated ringers at 200cc/hour.

e. Monitor vital signs every 5 minutes.

f. Place a tourniquet above the bite and place the extremity in a dependent position.

g. Obtain the following labs:

(1) Arterial blood gases if indicated

(2) CBC with platelets

(3) PT-PTT

(4) Type and cross for 4 units of packed RBCs

(5) Chem 20

(6) Urinalysis

(7) EKG

h. Ensure tetanus status. Inject 0.5cc of tetanus toxoid subcutaneously. Injection of HyperTET may be indicated if the victim's immunization status is in question.

i. Prepare for Habu anti-venom administration.

5. Habu Anti-venom

a. The Habu anti-venom preparation is dry and white to pale yellow in color, containing Habu (Trimersurus flavoviridis) anti-venom from horse immunoglobulin. With the addition of 20cc of diluent, the preparation becomes a colorless to pale yellow-brown, clear or slightly turbid liquid with a pH between 6.8 - 7.4. Its osmotic pressure ratio compared to physiological saline is approximately 1.

b. The preparation is composed of Habu antivenom obtained from refined blood serum of horses immunized with Habu toxin, to which is added 2.0W/V% sodium glutamate as a stabilizer before lyophilizing the mixture.

c. Store the preparation at 10 degrees Celsius or below while protecting it from the light. It should be noted that the diluent vial may break if frozen.

d. The expiration date is 10 years from the date passing governmental assay.

e. The preparation, when dissolved in 20cc of the included vial of diluent, contains 300 units per cc of antilethal, antihemorrhagic 1 and antihemorrhagic 2 titer.

f. The ordinary dose of Habu antivenom is approximately 6,000 units (about 20 cc), which should be administered at a site other than that of the bite as quickly as possible after being bitten, either by intramuscular or intravenous drip after dilution with physiological saline. An additional injection of 3,000 - 6,000 units (10 cc - 20 cc) may be given a few hours later, if no symptomatic relief is attained.

g. The preparation is contraindicated for patients who are hypersensitive to horse serum. Desensitization procedures, however, should be carried out with those who are in need of antivenom.

h. In treating the Habu bite it is necessary to administer the preparation with the least possible delay.

i. The use of the antivenom should be withheld in cases where no local pain, redness, edema, or bleeding occurs within an hour or two of the bite. Habu venom may not have been introduced into the body at all or only in an insignificant amount, or because a non-poisonous species of snake inflicted the bite.

6. Procedures for Administration of Habu Anti-venom

a. Examine the product carefully before and after reconstitution. Do not use it unless it is free from any sediment or foreign material.

b. Dissolve the preparation just before use. Use the preparation promptly after dissolving it since the thimerosal contained in the antivenom is ineffective as a conservative. It is strictly forbidden to store the unused portion of the antivenom for later use.

c. Serum sensitivity testing/Completion of Anti-venom

(1) The use of the preparation should be preceded by serum sensitivity testing to preclude the risk of serum sickness.

(2) When testing for hypersensitivity, the preparation is dissolved using the diluent included in the kit. Mix 0.1cc of the 20cc solution in 1.0cc of normal saline (10 fold dilution).

(3) Inject 0.1cc of the 10 fold dilution of the antivenom intradermally and examine for the next 30 minutes for any manifestations of local erythema (10 mm diameter) and/or systemic symptoms such as: hypotension, facial pallor, cold sweats, collapse, cold sensation in the extremities, or dyspnea.

(4) The eye drop test may be substituted for the intradermal test. Apply one drop of the 10 fold dilution of the antivenom in one eye and examine for itching and hyperemia of the bulbar conjunctiva during the following 20-30 minutes. Hyperemia is indicative of hypersensitivity.

(5) If a negative or mildly positive reaction is evoked in either of the above tests, then inject 1.0cc of the stock solution subcutaneously. If no abnormal reaction takes place within 30 minutes, slow injection of the required dose by the intramuscular or intravenous route is warranted.

(6) For intravenous drip, mix the required dosage of the stock solution in 250cc of normal saline and infuse over one hour while constantly monitoring for signs of serum sickness, hypotension, dyspnea, pruritus, and parathesias.

(7) It is dangerous to administer the preparation to a patient with a history of antitoxin therapy or severe hypersensitivity.

(8) For those patients with history of severe hypersensitivity, intradermally inject 0.1cc of a 100 to 1,000 fold dilution of the stock solution beginning with a 1,000 fold dilution in patients responding markedly to the hypersensitivity test.

(9) If no abnormal response in the blood pressure or other systemic symptoms is elicited within 30 minutes, inject 0.1cc of a 10 fold dilution by the same route.

(10) If no abnormality occurs during the next 30 minutes, inject 1.0cc of the stock solution subcutaneously and monitor for 30 minutes. If this proves uneventful, administer the entire dose by slow intravenous drip.

d. Abnormal Reactions

(1) In cases of an abnormal reaction developing at any of the stages described, repeat the procedure after a lapse of one hour, starting with the step immediately preceding that which gave rise to the abnormality.

(2) In patients with severe hypersensitivity, administer norepinephrine, antihistamatics, or corticosteroids and observe the subsequent course of their condition. Proceed with the treatment as soon as the patient is relieved of systemic symptoms.

e. If anaphylactoid shock accompanied by profound collapse, dyspnea, and hypotension has developed, the following drugs may be indicated:

(1) Epinephrine 1:1000 dilution, 0.3 - 0.5cc, administered subcutaneously.

(2) For severe reactions, 0.5cc of 1:1000 solution is mixed in 10cc of normal saline and given IV push.

(3) Benadryl 25 - 50 mg administered IV push.

(4) Oxygen.

(5) Intubation, tracheostomy or cricothyrotomy may be required.

(6) Corticosteroid as directed by specialist.

f. Antihistamines or corticosteroids may be used in cases of mild serum sickness; the prognosis is often favorable.

g. Delayed serum sickness may ensue 5 - 10 days after injection of the antitoxin. The sickness subsides in a few days but may be complicated by acute nephritis.