USACHPPM

VOL. 01 NO. 02 MAY 1995

MSMR

Medical Surveillance Monthly Report

Table of Contents

Rubella outbreak in German troops, Ft. Bragg 2
Selected notifiable conditions 4
Notifiable sexually transmitted diseases 6
Injury hospitalizations, ODS 7
Top ten corner: Disability evaluations 7
Tularemia case report 9
ARD surveillance update 10

Data in the MSMR is provisional, based on reports and other sources of data available to the Medical Surveillance Activity. Notifiable conditions are reported by date of onset (or date of notification when date of onset is absent). Only cases submitted as confirmed are included.

Report from the Field

Rubella Outbreak In German Troops at Fort Bragg

On 3 April 1995, 120 German paratroopers of the 4th Company, 252d Parachute Battalion stationed at Nagold, Germany arrived at Fort Bragg to participate in exercises with the 3/504 Parachute Infantry Regiment, 1st Brigade, 82d Airborne Division at JRTC, Fort Polk, Louisiana. Exercises were scheduled to begin on 14 April.

On the evening of 12 April, three of the German soldiers developed a maculopapular rash. One of these reported to the ER. His prodromal symptoms (malaise, low grade fever, and enlarged posterior auricular lymph nodes) and the rash proved consistent with rubella infection. The soldier was admitted and the Preventive Medicine Service was notified of the incident.

Beginning on the morning of 13 April, the entire German contingent was quarantined in their barracks. Five more Germans developed viral-like symptoms, but only one developed a rash. The presence of rubella at the German's home station was verified by their post surgeon. German army recruits do not receive rubella immunization. In fact, rubella immunization programs in Germany are aimed at adolescent females while males are generally allowed to obtain immunity naturally.

Of immediate concern was the amount of exposure the Germans had had with the host battalion dependents and the Fayetteville community. They had been entertained primarily by B Company, 3/504 PIR, but had been all over Fayetteville. Pregnant family members and family members of childbearing age were located and rubella status checked. Dependents under 12 months of age were also located to determine if child care centers had been exposed. The Cumberland County Public Health Department was notified of the soldiers' local travel history.

Also of concern was whether the Germans would be able to participate in the JRTC exercises. While IgM and IgG titers would assist in determining acute infection and immunity, obtaining these titers quickly did not initially appear possible. In an effort to salvage as much of the German company as possible for the exercises, it was decided to keep the sick soldiers at Fort Bragg, and administer serum immune globulin, 2.0 cc, to those without symptoms and allow them to continue with the mission. The command was informed that more soldiers would probably become ill at JRTC.

Following administration of ISG, state health authorities became involved in efforts to obtain IgM and IgG titers. Roche Biomedical Laboratories, Burlington, NC agreed to perform IgM titers on the sick soldiers and IgG titers on the entire company

Executive Editor
COL John F. Brundage, MD, MPH
Director Epidemiology and Disease Surveillance, USACHPPM

Editor
MAJ Mark V. Rubertone, MD, MPH
Chief, Army Medical Surveillance Activity, USACHPPM

Managing Editor
Vacant

Writers / Editorial staff
COL Bruce H. Jones, MD, MPH
MAJ Vincent P. Fonseca, MD, MPH
MAJ Sharon L. Ludwig, MD, MPH

Prepared by the Medical Surveillance Activity, Directorate of Epidemiology and Disease Surveillance, United States Army Center for Health Promotion and Preventive Medicine. Inquiries regarding content or material to be considered for publication should be directed to the editor, MAJ Mark Rubertone, Walter Reed Army Institute of Research, Bldg T-20, Rm 213, Washington DC, 20307-5100, DSN 662-1335, commercial (202) 782-1335. E-mail: "maj_mark_rubertone@wrsmtp-ccmail.army.mil".

Publishing office is the Executive Communications Division, U.S. Army Center for Health Promotion and Preventive Medicine, Aberdeen Proving Ground, Maryland 21010-5422, telephone 1-800-222-9698, DSN 584-2088, Commercial 410 671-2088.

Views and opinions expressed are not necessarily those of the Department of the Army.

overnight.

On 14 April two more soldiers presented with rash. Lab results revealed that of the 120 soldiers, 10 were non-immune (IgG titer <16). All 6 of the soldiers with rash were in the non-immune group. Only one of these soldiers had an elevated IgM of 2.64 (positive if >1.10) . No follow-up IgM titers were obtained. The non-immune soldiers were maintained in quarantine and the 110 immunes were allowed to participate in the JRTC exercises. As of 25 April, 4 of the 10 non-immunes have not developed clinical signs of rubella. All four had received serum immunoglobulin on 13 April.

Submitted by Stephen C. Craig, LTC, MC, Chief, Preventive Medicine Service, Womack Army Medical Center; DSN 236-5022/1281, commercial (910) 396-5022, FAX 236-5994, email "Braggpms@ftbragg-amedd.army.mil".

Editorial Comments: Comprehensive immunization coverage will control rubella. Live rubella virus vaccine (either monovalent vaccine or in combination with measles or mumps vaccines) induces seroconversion in >95% of susceptible recipients aged 12 months or older. The vaccine provides protection in >90% of recipients for at least 15 years. Although rubella control is primarily to prevent congenital rubella syndrome, rubella outbreaks can disrupt military operations.

Postnatal rubella has a 14-21 day incubation period and is characterized by posterior cervical, postauricular and suboccipital lymphadenopathy, a transient maculopapular rash lasting 1-3 days, and mild constitutional symptoms. Adults may have a prodrome of mild fever, malaise and upper respiratory symptoms 1-5 days before the rash. Complications include joint manifestations, encephalitis, and thrombocytopenia. Rash is not present in up to 50% of infections and the other symptoms are relatively non-specific. Therefore, cases may be confused

(continued on page 7)

(rubella outbreak continued)

National trend for rubella infections

Rubella was once a common childhood disease. Universal immunization of children has interrupted its transmission throughout most of the United States. The reported occurrence of rubella decreased steadily from more than 57,000 cases in 1969, the year rubella vaccine was licensed, to 225 cases in 1988. Rubella incidence increased five to six times from 1990 to 1991, primarily in teenagers and young adults, but then returned to record low levels in 1992 and 1993. In 1990 and 1991, 41% and 45%, respectively, of cases of known age occurred in those 15 years and older. From 1984 through 1989, an annual average of 5.5 cases of the congenital rubella syndrome were reported in the United States. However, concomitant with the increase in rubella cases was a resurgence of the congenital rubella syndrome with a marked increase in cases reported in 1990 and 1991. Of the 75 confirmed cases of the congenital rubella syndrome reported from 1986 through 1991, 48% might have been prevented by postpartum vaccination of susceptible women. An estimated 6% to 11% of young adults remain susceptible to rubella (approximately 14-15% of Army recruits were seronegative for rubella in 1989-1992), and limited outbreaks continue to be reported in colleges, places of employment (notably hospitals), and in largely unvaccinated populations such as the Amish.

Information regarding national trends taken from the Guide for Adult Immunization, American College of Physicians task force on Adult Immunizations, 1994.

TABLE I. Cases of selected notifiable conditions, United States Army.*
April, 1995

Reporting MTF/Post**	Total number of reports submitted April, 1995	Environmental Injuries			Viral Hepatitis			Malaria	Varicella	
		Active Duty		CO intox.				Active Duty	Active Duty	Other Adult
		Heat	Cold		A	B	C			
		Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995
NORTH ATLANTIC HSSA										
Walter Reed AMC	21	-	-	-	-	2	-	1	-	-
Aberdeen Prov. Ground	6	-	-	-	-	-	-	-	-	-
FT Belvoir, VA	9	-	-	-	-	-	-	-	-	-
FT Drum, NY	23	-	21	-	-	-	-	-	12	1
FT Eustis, VA	0	-	-	-	-	-	-	-	-	-
FT Knox, KY	66	-	-	-	-	-	1	-	-	-
FT Lee, VA	5	-	-	-	-	-	-	-	9	-
FT Meade, MD	0	-	-	-	-	-	-	-	-	-
USMA, West Point, NY	0	-	-	-	-	-	-	-	-	-
CENTRAL HSSA										
Fitzsimons AMC	0	-	-	-	-	-	-	-	-	-
FT Carson, CO	88	-	-	-	-	-	-	-	6	-
FT Leonard Wood, MO	19	-	1	-	-	1	-	-	20	3
FT Leavenworth, KS	0	-	-	-	-	-	-	-	-	-
FT Riley, KS	60	-	1	-	-	-	-	-	-	-
SOUTH CENTRAL HSSA										
Brooke AMC	3	-	-	-	1	-	-	-	-	-
FT Hood, TX	103	-	-	-	-	1	-	-	21	1
FT Polk, LA	4	2	-	-	-	-	-	-	-	-
FT Sill, OK	0	-	-	3	-	-	-	-	-	-
Panama	8	2	-	-	2	1	1	-	-	-
SOUTHEAST HSSA										
Eisenhower AMC	32	-	-	-	-	-	1	-	1	-
FT Benning, GA	0	-	10	-	-	-	-	-	-	-
FT Bragg, NC	11	-	-	-	-	-	-	-	-	-
FT Campbell, KY	1	-	-	-	1	-	-	-	2	-
FT Jackson, SC	22	-	-	-	-	-	-	-	4	-
FT McClellan, AL	16	-	-	-	-	-	-	-	-	-
FT Rucker, AL	0	-	-	-	-	-	-	-	-	-
FT Stewart, GA	0	-	-	-	-	-	-	-	-	-
SOUTHWEST HSSA										
Wm Beaumont AMC	10	-	-	-	-	-	-	-	3	2
FT Huachuca, AZ	0	-	-	-	-	-	-	-	-	-
FT Irwin, CA	0	-	-	-	-	-	-	-	-	-
NORTHWEST HSSA										
Madigan AMC	3	-	-	-	-	-	-	-	-	-
FT Wainwright, AK	0	-	16	-	-	-	-	-	-	-
PACIFIC HSSA										
Tripler AMC	66	-	-	-	-	2	-	5	-	-
OTHER LOCATIONS										
Europe	23	-	4	2	-	1	-	-	1	-
Korea	75	-	8	-	-	-	-	-	10	-
Total	**674**	**4**	**61**	**5**	**4**	**8**	**3**	**6**	**89**	**7**

* Based on date of onset.

** Reports are included from parent and daughter clinics. Not all sites reporting.

Date of Report: 7-May-95

TABLE I. Cases of selected notifiable conditions, United States Army* (continued)
April, 1995

Reporting MTF/Post**	Salmonellosis			Shigella			Campylobacteriosis			Tuberculosis	
	Active Duty	Other		Active Duty	Other		Active Duty	Other		Active Duty	Other
		Adult	Child		Adult	Child		Adult	Child		
	Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995
NORTH ATLANTIC HSSA											
Walter Reed AMC	-	-	-	-	-	-	-	-	-	-	-
Aberdeen Prov. Ground	-	-	-	-	-	-	-	-	-	-	-
FT Belvoir, VA	-	1	1	-	-	1	-	-	-	-	-
FT Drum, NY	-	-	-	-	-	1	-	1	-	-	-
FT Eustis, VA	-	-	-	-	-	-	-	-	-	-	-
FT Knox, KY	1	-	-	-	-	-	-	-	-	-	-
FT Lee, VA	-	-	-	-	-	-	-	-	-	-	-
FT Meade, MD	-	-	-	-	-	-	-	-	-	-	-
USMA, West Point, NY	-	-	-	-	-	-	-	-	-	-	-
CENTRAL HSSA											
Fitzsimons AMC	-	-	-	-	-	-	-	-	-	-	-
FT Carson, CO	-	1	1	-	-	-	-	-	1	-	-
FT Leonard Wood, MO	-	-	1	-	-	-	-	-	-	-	-
FT Leavenworth, KS	-	-	-	-	-	-	-	-	-	-	-
FT Riley, KS	-	-	-	-	-	-	-	-	-	-	-
SOUTH CENTRAL HSSA											
Brooke AMC	-	-	-	-	-	-	-	-	-	-	-
FT Hood, TX	-	-	-	-	1	-	-	-	-	-	-
FT Polk, LA	-	-	-	-	-	-	-	-	-	-	-
FT Sill, OK	-	-	-	-	-	-	-	-	-	-	-
Panama	2	2	5	-	1	-	-	2	7	-	-
SOUTHEAST HSSA											
Eisenhower AMC	-	-	-	-	-	1	-	-	1	-	-
FT Benning, GA	-	-	-	-	-	-	-	-	-	-	-
FT Bragg, NC	1	1	2	-	-	-	2	-	1	-	-
FT Campbell, KY	-	-	-	1	-	2	-	-	-	-	-
FT Jackson, SC	-	-	-	-	-	-	-	-	-	2	-
FT McClellan, AL	-	-	-	-	-	-	-	-	-	-	-
FT Rucker, AL	-	-	-	-	-	-	-	-	-	-	-
FT Stewart, GA	-	-	-	-	-	-	-	-	-	-	-
SOUTHWEST HSSA											
Wm Beaumont AMC	-	-	1	-	-	-	-	-	-	-	-
FT Huachuca, AZ	-	-	-	-	-	-	-	-	-	-	-
FT Irwin, CA	-	-	-	-	-	-	-	-	-	-	-
NORTHWEST HSSA											
Madigan AMC	-	-	-	-	-	-	-	-	-	-	-
FT Wainwright, AK	-	-	-	-	-	-	-	-	-	-	-
PACIFIC HSSA											
Tripler AMC	-	-	2	-	-	-	3	-	-	-	-
OTHER LOCATIONS											
Europe	-	1	1	-	-	-	1	1	-	-	-
Korea	1	-	1	-	-	-	-	-	-	-	-
Total	**5**	**6**	**15**	**1**	**2**	**5**	**6**	**4**	**10**	**2**	**0**

* Based on date of onset.

** Reports are included from parent and daughter clinics. Not all sites reporting.

Date of Report: 7-May-95

TABLE II. Cases of notifiable sexually transmitted diseases, United States Army. April, 1995

Reporting MTF/Post*	Chlamydia		Gonorrhea		Herpes Simplex		Syphilis Prim/Sec		Syphilis Latent		Urethritis non-spec.		Other STDs**	
	Cur. Month	Cum. 1995	Cur. Month	Cum. 1995	Cur. Month	Cum. 1995	Cur. Month	Cum. 1995	Cur. Month	Cum. 1995	Cur. Month	Cum. 1995	Cur. Month	Cum. 1995
NORTH ATLANTIC HSSA														
Walter Reed AMC	7	8	1	1	-	-	-	1	-	-	-	-	1	3
Aberdeen Prov. Ground	-	20	3	11	-	-	-	-	-	-	-	2	-	-
FT Belvoir, VA	5	9	-	7	-	2	-	1	-	-	-	-	-	1
FT Drum, NY	4	20	1	13	1	8	-	-	-	-	-	6	-	-
FT Eustis, VA	-	6	-	6	-	-	-	-	-	-	-	-	-	-
FT Knox, KY	-	37	-	12	-	4	-	-	-	-	-	-	-	-
FT Lee, VA	1	6	2	20	-	1	-	-	-	-	-	1	-	-
FT Meade, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-
USMA, West Point, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CENTRAL HSSA														
Fitzsimons AMC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Carson, CO	27	111	7	45	5	24	-	-	-	-	24	118	-	1
FT Leonard Wood, MO	5	25	2	16	1	2	-	2	-	-	-	14	-	1
FT Leavenworth, KS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Riley, KS	8	42	2	12	-	-	1	2	-	-	-	-	-	-
SOUTH CENTRAL HSSA														
Brooke AMC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Hood, TX	15	228	1	119	-	10	-	3	2	8	-	40	-	2
FT Polk, LA	2	2	2	3	1	1	-	-	-	-	-	-	-	-
FT Sill, OK	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Panama	-	-	3	7	2	2	-	6	-	-	-	-	-	1
SOUTHEAST HSSA														
Eisenhower AMC	4	31	1	13	6	11	-	1	-	-	-	2	-	1
FT Benning, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Bragg, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Campbell, KY	-	101	-	36	-	6	-	1	-	-	-	51	-	-
FT Jackson, SC	8	52	3	16	2	11	-	-	-	1	-	-	-	1
FT McClellan, AL	3	9	4	7	-	1	-	-	-	-	-	-	-	-
FT Rucker, AL	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Stewart, GA	-	8	-	-	-	2	-	-	-	-	-	5	-	1
SOUTHWEST HSSA														
Wm Beaumont AMC	10	16	3	3	-	-	-	-	-	-	-	-	-	-
FT Huachuca, AZ	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Irwin, CA	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NORTHWEST HSSA														
Madigan AMC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Wainwright, AK	-	9	-	5	-	-	-	-	-	1	-	-	-	-
PACIFIC HSSA														
Tripler AMC	12	63	12	32	11	40	-	-	-	-	-	-	1	2
OTHER LOCATIONS														
Europe	-	22	-	2	-	1	-	-	-	-	-	-	2	2
Korea	2	11	-	7	-	3	-	-	-	1	-	-	-	1
Total	**113**	**836**	**47**	**393**	**29**	**129**	**1**	**17**	**2**	**11**	**24**	**239**	**4**	**17**

* Reports are included from parent and daughter clinics. Not all sites reporting. Date of Report: 7-May-95

** Other STDs: (a) Chancroid (b) Granuloma Inguinale (c) Lymphogranuloma Venereum (d) Syphilis unspec. (e) Syph, tertiary (f) Syph, congenital

with other diseases making lab confirmation important.

Lab confirmation is made by either the presence of IgM antibody or a significant rise in IgG or total antibody levels. IgM is best detected in a sample taken 1-2 weeks after the rash, but is detectable up to 4-5 weeks. Samples for acute titers should be drawn as soon as possible after the rash onset (<7 days) with the convalescent sample drawn >10 days after the acute sample. To test for subclinical infection, an acute sample should be drawn soon after exposure with the convalescent sample drawn 28 days later. Outbreak control measures should be taken pending lab results.

Patients are highly communicable by direct contact or droplet spread for 7 days prior to the rash and 5-7 after the rash onset. Transmission is prevented by isolating patients from work or school for 7 days after the rash. Contacts, especially women pregnant in the first trimester, should be evaluated for susceptibility for infection and counseled appropriately. Although rubella vaccine will not prevent illness, all persons who cannot provide evidence of immunity (lab evidence or documentation of vaccine) should be considered susceptible and immunized unless contraindicated by immuno- compromise, allergy to neomycin, or pregnancy. Immune globulin is not routinely recommended for postexposure prophylaxis since it may not prevent infection although it may prevent symptoms.

Army policy to immunize male recruits, susceptible female recruits, and susceptible health care workers is consistent with the Public Health Service recommendation to immunize adults lacking evidence of immunity. As this case demonstrates, ensuring rubella immunity of non-DOD personnel will be required to prevent future outbreaks.

Current Trends

Injury Hospitalizations During Operations Desert Shield and Storm

A major deployment of US soldiers such as Operation Desert Shield/Storm places a burden on the Army's medical assets. Over 353,000 soldiers served in the Persian Gulf. Although younger and healthier than the US population in general, deployed soldiers often have battle and non-battle related medical problems. During the Persian Gulf War 24,056 soldiers were hospitalized in Army hospitals in Saudi Arabia. Of these nearly 29% were due to injuries.

Table 1 (page 8) shows the 15 most common causes of injury hospitalizations in Saudi Arabia between August 1990 and July 1991. Non-battle

(continued next page)

(Injuries continued)

Top 10 Corner

Top 10 Disability Evaluations of Active Duty Army, Calendar Year, 1994

VASRD* code	Diagnostic category	n	%
5295	Lumbosacral strain	381	4.5
5257	Knee impairment	349	4.1
5003	Degenerative arthritis	345	4.1
5293	Intervertebral disc syndrome	215	2.5
5010	Arthritis, due to trauma	129	1.5
9206	Bipolar disorder	109	1.3
6351	HIV-related illness	99	1.2
8045	Brain disease due to trauma	94	1.1
9411	Posttraumatic stress disorder	82	1.1
9207	Major depression	73	1.1

** Veterans Administration Schedule for Rating Disabilities*

Source: US Army Physical Disability Agency

injuries play a significant role accounting for all but 2 of the top fifteen. Sports related injuries are prominent on the list (i.e. football, basketball, other athletics and sports).

Surveillance data such as these can have a number of important uses. Knowing the expected number and type of hospitalizations for different types of operations can help commanders deploy appropriate and sufficient medical assets. When combined with outpatient surveillance data, hospitalization data can help identify emerging health threats during deployments. Diagnosis and cause of injury data can be used to prevent manpower losses during a deployment. These could include pre-deployment screening (e.g., chronic back problems, asthma), or deployment interventions (e.g., education, banning certain activities, vaccines) to reduce in-theater losses of unit strength and effectiveness.

Submitted by James Writer, Division of Preventive Medicine, Walter Reed Army Institute of Reseach, Washington, DC 20307, DSN:662-1315, commercial (202) 782-1315, FAX 662-0613, E-Mail "Writer@wrair-emh1.army.mil

Editorial Comments: Injuries and musculoskeletal conditions accounted for over 42% of hospitalizations among soldiers deployed to Southwest Asia (SWA) between August of 1990 and July of 1991. However, during the early phases of Desert Shield the primary medical concerns focused on prevention of infectious diseases and heat injuries. These data suggest that during future military operations significant losses of manpower may be averted by efforts to prevent injuries as well as infectious diseases and environmental casualties.

(Continued next page)

Table 1. 15 most common causes of injury among US soldiers hospitalized for injuries in Saudi Arabia during Operation Desert Shield/Storm.

ICD9 E-Code	Cause of injury	n	%
980	Other specified agents, not elsewhere classified	2458	32.05
910	Other fall or jump from one level to another	387	5.05
449	Shell fragment, other or unspecified on the ground, by enemy during hostilities	385	5.02
750	Fire or explosion with fire and conflagration	273	3.56
226	Football (American)	245	3.19
920	Falls or jumps on same level, including unspecified falls	241	3.14
940	Twisting or turning or slipping or running, not elsewhere classified, without fall	213	2.78
950	Lifting, pushing or pulling	201	2.62
112	Unspecified occupant of military motor vehicle	178	2.32
450	Bullet, nonexploding, nonincendiary or unspecified on the ground, by enemy during hostilities	149	1.94
299	Late complications or late effects of old injuries	130	1.70
239	Other athletics and sports	129	1.68
660	Falling or projected object or missile (excluding bullet)	122	1.59
640	Cutting and piercing instruments	112	1.46
221	Basketball	100	1.30

Source: Individual Patient Data System, USA Patient Administration Systems and Biostatistical Activity, Fort Sam Houston, TX

(Injuries continued)

During usual peacetime training and operations, injuries and poisoning (ICD-9 codes 800-999) and musculoskeletal and connective tissue disorders (ICD-9 codes 710-739) comprise about 30% of total hospitalizations. During ODS/DS acute injuries alone accounted for 29% of hospitalizations. Another 14% of hospitalizations among deployed soldiers resulted from recurrent or chronic musculoskeletal disorders, such as intervertebral disc syndrome (1.7% of the total), other disorders of the back (3.9%), internal derangements of the knee (1.0%), other joint disorders (1.1%), many of which may have existed prior to deployment.

These data suggest that when conservation of fighting strength is most critical, combat commanders may want to implement measures to prevent injuries as well as other traditional strategies to prevent disease and environmental casualties. The dangers of American style football are well known to deployed US forces. During the troop build-up before the D-Day assault on Normandy, football was banned in US Army camps in England (1). Instead, the Army provided soldiers with gloves, bats and baseballs. Other effective strategies to prevent sports injuries, hazards from falls and jumps, and motor vehicle crashes could significantly reduce manpower losses.

References

(1) Ambrose, Stephen E. D-Day, June 6, 1944: The climactic battle of World War II. Simon and Schuster, New York. 1994.

Case Report

Tularemia in a child with hemophilia and HIV-1 disease

An 11 year old child with hemophilia and advanced HIV-1 disease was admitted to Madigan Army Medical Center (MAMC) with fever and severe headaches on March 19, 1995. Lumbar puncture was negative but he rapidly developed splenomegaly and hepatomegaly. He was placed on cephalosporin antibiotics and released when his fever resolved. After his fever relapsed, he was readmitted and placed on gentamicin with surprisingly rapid improvement despite his low CD4 count. Blood cultures on chocolate agar yielded a fastidious, small gram-negative, aerobic rod which was sent to the Washington State laboratory and identified as *Francisella tularensis*. He has since developed a relapse of fever and headache and has been readmitted to MAMC.

He had no known exposures to rodents or small mammals although approximately three months previously he was exposed to a fawn that a neighbor had rescued and subsequently released into the wild.

Submitted by Dallas C. Hack LTC, MC, Preventive Medicine Service, Madigan Army Medical Center, Tacoma WA, 98431, DSN: 782-4467/4479, commercial (206) 968-4467, FAX 782-4483.

Editorial Comments: Also known as Rabbit fever, Deerfly fever and Ohara disease, tularemia is an acute febrile illness to which humans are highly susceptible (1). It is a zoonotic disease that is caused by infection with the bacteria, *Francisella tularensis.* Tularemia is ubiquitous in the northern

(Continued page 11)

ARD Surveillance Update

Legend

———	ARD Rate	= (ARD cases / Trainees) * 100
▪ ▪ ▪	SASI*	= ARD Rate Strep Rate**

FT Benning

Ft Jackson

Ft Knox

Ft Leonard Wood

Ft McClellen

Ft Sill

Table IV. ARD surveillance rates, submitted by Army TRADOC posts

* Strep/ARD Surveillance Index (SASI) **Strep Rate = (GABHS(+) / Cultures) 100

Note: SASI has proven to be a reliable predictor of serious strep-related morbidity, especially acute rheumatic fever.

(Tularemia continued)

hemisphere having been documented in Japan, Russia, Canada, Mexico and in all states of the United States except Hawaii. In the United States in 1988, Arkansas, Oklahoma and Missouri were the states from which half the cases were reported. Tularemia occurs throughout the year, with peaks in the summer (transmitted by ticks) and winter (associated with hunting and trapping).

Clinically, tularemia can be highly variable, with manifestations related to the route of introduction and the virulence of the strain. Most often it presents as an indolent ulcer, often on the hand, accompanied by swelling of the regional lymph nodes (ulcerglandular type) (2). The incubation period ranges from a few hours to 21 days, with a mean of 4.5 days. In most cases, disease is of abrupt onset with systemic symptoms (e.g., fever, chills, headache, backache, malaise and weakness). Diagnosis is most commonly made by a rise in specific antibodies in the patient's serum.

Transmission of tularemia is by arthropod bites (especially hard ticks and deer flies), and contact with blood or tissues of wild animals (especially rabbits and hares). Transmission may also occur by ingestion of insufficiently cooked wild animal meat, ingestion of contaminated water, or inhalation of dust. There is no person-to-person spread.

Prevention of tularemia in military populations includes measures, on or off duty, to avoid: arthropod bites, contact with blood of wild animals and ingestion of contaminated food or water. Arthropod bites can be avoided by proper wearing of clothing (sleeves down, pant legs tucked in), the use of DEET on exposed skin and permethrin on clothing and the use of buddy checks. Although tularemia is uncommon in the US (~300 cases/year), the methods used to prevent tularemia will prevent other more common diseases of military importance.

References

(1) Hunter's Tropical Medicine, 7th Edition, G. Thomas Strickland, ed. W.B. Saunders Company, 1991

(2) Control of Communicable Disease in Man, 15th Edition, Abram S. Benenson, ed. American Public Health Association, 1990.

Notice to Readers

Requests to be placed on the mailing list for the MSMR should be forwarded to the editor at the following E-Mail address:

MAJ_Mark_Rubertone@WRSMTP-CCMAIL.ARMY.MIL

DEPARTMENT OF THE ARMY
U.S. Army Center for Health Promotion
and Preventive Medicine (Provisional)
Aberdeen Proving Ground, MD 21010-5422

OFFICIAL BUSINESS

MCHB-DD-A