susceptibility testing revealed that the organism was *O. anthropi*
and that it was susceptible only to trimethoprim-sulfamethoxazole
(TMP-SMZ), ciprofloxacin, imipenem, and gentamicin (the typical
susceptibility pattern for this organism) [2].

The patient was treated with vancomycin, rifampin, ciprofloxacin,
and TMP-SMZ for 6 weeks, followed by ciprofloxacin and
TMP-SMZ for 4 1/2 months. Her wound healed, and her symptoms
have not recurred.

*O. anthropi* is an oxidase-positive, non-lactose-fermenting
gram-negative bacillus. This organism (formerly CDC [Centers
for Disease Control and Prevention] group Vd) was named
*O. anthropi* in 1988 and is the only species in the group. Other
closely related oxidase-positive nonfermenters are the
*Achromobacter*-like organisms: *Achromobacter xylosoxidans*, *Agrobacterium
radiobacter*, and *Achromobacter* group B. Most of the early
reports of infections due to these organisms, especially *O. anthropi*,
described catheter-related bacteremias [3].

Two of the three cases of pyogenic infection due to *O. anthropi*
recently reported by Cieslak et al. [1] involved a foreign body (a
draining T tube in one case and a chest tube in the other); the
third case did not involve a foreign body. Alnor et al. [4] studied
bacterial adhesion to silicone tubing by *Agrobacterium* and
*Ochrobactrum* and found that the binding abilities of both organisms
were similar to those of *Staphylococcus epidermidis* and *Staphylo-
coccus aureus*. Infections due to all three of the related *Achromo-
bacter*-like organisms have been shown to be associated with pros-
thetic cardiac devices; these infections include a postoperative
infection of an aortic prosthesis with *A. xylosoxidans* [5], prosthetic
valve endocarditis due to *A. radiobacter* [6], and replacement valve
endocarditis due to *Achromobacter* group B [7].

We believe this is the first report of a serious infection of a
cardiac prosthetic device with *O. anthropi*. Although it is an un-
usual pathogen, isolation of this species should not come as a
surprise when infections involve catheters, silicone tubing, and
foreign bodies.

Kenneth C. Earhart, Ker Boyce, W. Dale Bone,
and Mark R. Wallace
Departments of Internal Medicine (Infectious Diseases and Cardiology
Divisions) and Clinical Investigation, Naval Medical Center,
San Diego, California

References
1. Cieslak TJ, Drabick CJ, Robb ML. Pyogenic infections due to
2. von Graevenitz A. Oxidase-positive, indole-negative, saccharolytic
nonfermenters. In: Murray PR, Baron EJ, Pfaller MA, Tenover FC, Yolken
3. Cieslak TJ, Robb ML, Drabick CJ, Fischer GW. Catheter-associated sepsis
caused by *Ochrobactrum anthropi*: report of a case and review of related
the unusual human pathogens *Agrobacterium species* and *Ochrobactrum
5. Olson DA, Hoeprich PD. Postoperative infection of an aortic prosthesis
7. McKinley KP, Laundry TJ, Masterton RG. *Achromobacter group B replace-

The views expressed in this article are those of the authors and do not
reflect the official policy or position of the U.S. Department of the Navy, the
Department of Defense, or the U.S. Government.

The Chief, Navy Bureau of Medicine and Surgery, Washington, D.C., Clinical
Investigation Program sponsored this report #84-16-1968-006, as required by
HSETCINST 6000.41A.

Reprints or correspondence: LT K. C. Earhart, MC, USNR, c/o Clinical
Investigation Department, Naval Medical Center, 34800 Bob Wilson Drive,
San Diego, California 92134-5000.

Clinical Infectious Diseases 1997;24:281–2
This article is in the public domain.

Primary Human Immunodeficiency Virus Type 1
Infection May Vary in Time, Place, and Person

SIR—A recently reported case of severe primary human immuno-
deficiency virus (HIV) type 1 infection with rapid progression to
AIDS and death [1] adds to the sizeable number of cases already
published in the literature [2–5]. Are these isolated cases caused
by a virulent strain that infects a patient with an impaired immune
response, as was the case in the report by Holland et al. [1], or
should we expect a growing number of cases of severe primary
HIV-1 infection?

The answer to this important question may lie in a greater under-
standing of the role of primary HIV-1 infection in AIDS epidemics.
Symptomatic primary HIV-1 infection was first recognized in 1984
[6], but it has been postulated that, for AIDS epidemics to happen,
high levels of viremia during primary HIV-1 infection are required
[7]. An evolutionary balance may have ensured that HIV variants
that cause relatively high levels of viremia but low rates of symp-
toms during primary HIV-1 infection were selected for in the early
stages of the AIDS epidemic.

After a period of rapid spread fueled by primary HIV-1 infection
[7, 8], transmission from persons in the late stages of HIV infection
increases in importance [8, 9]. These individuals have a high pro-
portion of syncytium-inducing variants that result in more-severe
primary HIV-1 infection in their partners [10]. All things being
equal, severe cases of primary HIV-1 infections should appear
when the first cases of AIDS occur or shortly thereafter, as we
report elsewhere [5].

Some cases of symptomatic primary HIV-1 infection are associ-
ated with sexual contact with an AIDS patient [4]. Thus, symptom-
atic infection may reflect both the failure of an infected individual
with HIV-related symptoms to adopt safer sexual practices and of
the uninfected partner to recognize manifestations indicative of
HIV infection. It follows that individuals in communities whose
members are well educated and are highly motivated to avoid HIV
infection should have a low rate of symptomatic primary HIV
infection (as well as a low rate of incident infections). Conversely,
individuals in communities whose members are not highly edu-
cated and have little motivation to avoid HIV infection should have
a high rate of symptomatic seroconversions.

In a population-based study [5], we found that heterosexual men
with HIV-1 infection were more likely to have had a severe pri-
mary infection than were heterosexual women with HIV-1 infec-

In a population-based study [5], we found that heterosexual men
with HIV-1 infection were more likely to have had a severe pri-
mary infection than were heterosexual women with HIV-1 infec-

tion. The observed gender difference could be due to variations in sexual behavior. Heterosexual men with advanced HIV infection may be unable to have sex due to decreased libido or may choose to use a condom. In contrast, women with AIDS who do not have equal power in their sexual relationships may be unwilling to refuse unprotected sex, thereby exposing their partners at a time of viremia with syncytium-inducing variants.

The significance of primary HIV-1 infection for public health would be best determined by instituting a program of surveillance in each locality. The rate of symptomatic primary HIV-1 infection may even predict future trends in AIDS cases. It is particularly important that countries with epidemics in communities whose members are not well educated should monitor cases of symptomatic primary HIV-1 infection as they may be an early indicator of failed health education.

Christopher P. Hudson and Paul N. Levett
Queen Elizabeth Hospital, Bridgetown, Barbados

References


Reprints or correspondence: Dr. C. P. Hudson, Department of Medicine, University of Cape Town, 916 Groote Schuur Hospital, Observatory 7925, Cape Town, South Africa.

Clinical Infectious Diseases 1997;24:282–3
© 1997 by The University of Chicago. All rights reserved.
1058-4838/97/2402–0041$02.00

Reply

SIR—We agree with Hudson and Levett that the high viral load in patients who undergo HIV-1 seroconversion is likely to facilitate transmission of HIV-1 to their sexual contacts. Syncytium-inducing strains may be present in individuals who have undergone seroconversion (and in AIDS patients) and are associated with high viral loads, symptomatic primary infection, and more-rapid immune decline [1]. However, it must be remembered that nonsyncytium-inducing viruses are also detected in individuals who have undergone HIV-1 seroconversion (and in AIDS patients) as well as in conjunction with high viral load and transmission [2]. Our report demonstrates severe progressive symptomatic primary infection with a macrophage tropic nonsyncytium-inducing virus [3].

The investigators’ hypothesis that individuals in communities whose members are well educated and are highly motivated to avoid HIV infection should have a lower rate of symptomatic primary HIV-1 infection than individuals in communities whose members are not well educated and highly motivated to avoid HIV infection is speculative given the many factors that may influence recognition of clinical HIV-1 seroconversion. These factors include medical and community awareness (especially in cases where patients are from communities whose members are not considered at risk of HIV infection), patient reporting of symptoms and presentation to medical services, and the availability of specialized HIV diagnostic tests. It is reasonable that surveillance for HIV seroconversion illness (as currently performed in Australia [4]) be performed to provide data on new HIV infections and to answer issues such as those raised by Hudson and Levett. Early recognition of primary HIV infection may also allow patients to receive antiretroviral therapy during this period of high viral load [5].

Dominic E. Dwyer, David J. Holland, Nitin K. Saksona, Hassan Naif, Donald R. Packham, Jean Downie, and Anthony L. Cunningham

Departments of Virology and Infectious Diseases, Centre for Infectious Diseases and Microbiology, Westmead Hospital, Westmead, and the University of Sydney, Westmead, New South Wales, Australia

References


Reprints or correspondence: Dr. Dominic E. Dwyer, Departments of Virology and Infectious Diseases, Centre for Infectious Diseases and Microbiology, Westmead Hospital and the University of Sydney, Westmead, New South Wales 2145, Australia.
Clinical Infectious Diseases 1997;24:283
© 1997 by The University of Chicago. All rights reserved.
1058-4838/97/2402–0041$02.00

Risk Factors for Acute Otitis Media

SIR—In their meta-analysis of risk factors (or indicators) for acute otitis media (AOM) in children, Uhari and co-workers chose to pool individually the crude risk ratios (calculated from the figures