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# ទ្រព័របាល ការពិនិត្យវិបត្រិក បន្ទះកំការងារ

WEEKLY EPIDEMIOLOGICAL  
SURVEILLANCE REPORT

July 4, 1986

Neisseria Gonorrhoea: 305

Resistance to Multiple  
Antibiotics

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Preventing Transmission  
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## គ្រោង

(ព័ត៌មានថ្ងៃទី 25; Vol 17 No. 25 )

### Neisseria Gonorrhoeae:

#### Resistance to Multiple Antibiotics

In combination with trimethoprim, sulfamethoxazole maintains acceptable activity against gonococci. Trimethoprim/sulfamethoxazole is highly effective against *Haemophilus ducreyi* and may sometimes be useful as an alternative in chlamydial infections, such as lymphogranuloma venereum.

Rifampicin should not be used to treat gonococcal infection since it rapidly leads to development of resistance during therapy.

#### Strategies for Diminishing or Delaying Bacterial Drug Resistance in STD Treatment

##### In General

The misuse of antibiotics should be avoided. The use of appropriate laboratory procedures such as bacterial culture, microscopic examination, and serologic methods allows correct diagnosis and specific treatment. Many new methods for rapid diagnosis of infections and for antibiotic sensitivity testing are already available. Their integration into routine practice is urgently needed. Antibiotic therapy should be based, not only on clinical assumptions, but also on applicable information from the laboratory, whenever possible.

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*An effective antibiotic that takes into consideration local resistance patterns should be chosen.*

Chemical substances that inhibit the action of antibiotic-destroying enzymes may restore the usefulness of antibiotics and may prove to be very valuable. Beta-lactamase inhibitors, such as clavulanic acid, are now available and their therapeutic value in combination with penicillins and cephalosporins is currently under investigation. Nontoxic substances that eliminate plasmids responsible for resistance from respective bacteria might be useful in reversing resistance to susceptibility.

### *In Gonorrhea*

Systematic surveillance of penicillinase-producing *N. gonorrhoeae* and other resistant strains should be instituted to formulate effective treatment policies.

Treatment regimens should be standardized and based on the prevalence of drug-resistant organisms.

Follow-up examinations should be performed routinely to detect treatment failures.

Early, effective treatment of sexual partners should be performed routinely to slow the spread of drug-resistant organisms.

(Source: Dr. A. Luger, President, International Union Against Venereal Diseases and Treponematoses, Vienna, Austria.)

### **Editorial Note**

At present, early, effective treatment of STD patients and their sexual partners is the basic component of STD control efforts. However, in many countries proliferation of inadequate, ineffective treatment regimens utilized by physicians and allied health personnel or purchased by patients directly from pharmacies encourages the development of antibiotic-resistant organisms. At the same time, as a result of changing social and sexual mores, the incidence of gonorrhea is increasing. The frequency of finding resistant organisms is also likely to increase. In some countries the usefulness of inexpensive, easy-to-use, simple antibiotic regimens has been lost, and the cost of STD control efforts will increase proportionately as countries resort to more expensive or complicated antibiotic treatments.

In the foregoing paper, the author discusses briefly some of the advantages and disadvantages of specific antibiotics for the treatment of *Neisseria gonorrhoeae* infections. The following points, however, deserve special emphasis: 1) Each country should take steps to ensure systematic surveillance of antibiotic susceptibility of *N. gonorrhoeae* strains. Special attention should be paid to the detection of the penicillinase-producing strain. 2) Data obtained by surveillance of antibiotic susceptibility should be used to standardize treatment schedules for gonococcal infection. In the absence of susceptibility data, antibiotic regimens that have proved to be effective in countries where this surveillance is carried out should be utilized. Standardized therapies must be readjusted from time to time in response to changes in local antibiotic-resistance patterns.

In a previous issue of the *Epidemiological Bulletin* (Vol. 3, No. 6, 1982) attention was drawn to the general problem of antibiotic misuse. As antibiotic resistance of many bacteria continues to grow, it is important to note the implication of such resistance for STD control, since it is so heavily dependent on correct, effective therapy.

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## บทความ

### DEFINITIONS

**Recommendations for Preventing Transmission of Infection with Human T-Lymphotropic Virus Type III/Lymphadenopathy-Associated Virus during Invasive Procedures**

**บทความ** เรื่องนี้เป็นข้อแนะนำที่เกี่จจากการประชุมของผู้เชี่ยวชาญ

โรค AIDS ที่ CDC สหรัฐอเมริกา สำหรับบุคลากรทางการแพทย์ที่ทำการบำบัดรักษา แก่ผู้ป่วยโรค AIDS ที่ต้องมีการใส่สาย เจาะเลือด หรือวิธีการอื่น ๆ ซึ่งทำให้ต้องสัมผัส กับสารหลังจากร่างกายของผู้ป่วย เมื่อว่าในขณะนี้ยังไม่มีรายงานผู้ป่วยโรค AIDS ใน ประเทศไทยเพิ่มเติม กระทรวงสาธารณสุขยังคงเฝ้าระวังอย่างใกล้ชิดและเห็นประโยชน์ ที่จะเผยแพร่ข่าวคราวลดลงของแนวโน้มในด้านการป้องกันให้ได้ทราบทั่วโลก หลักการ ที่สำคัญสำหรับข้อแนะนำในฉบับนี้คือ ผู้ให้การรักษาพยาบาลผู้ป่วยจะต้องมีเครื่องป้องกัน ตนเองจากการสัมผัสกับสารหลัง ได้แก่ เลือด น้ำเหลือง น้ำลาย อุจจาระ ปัสสาวะ ของผู้ป่วย เช่น ไส่ยุงมือทุกครั้งที่ต้องจับต้องสารเหล่านั้น วนนดา เสื้อกาวน์ ผ้าปิดปากจมูก เป็นต้น และจะต้องระมัดระวังการมาติดเชื้อในระหว่างให้การรักษาพยาบาล เช่น เข็มแทง หรือ มีคมบาด นอกจากนี้ก็ต้องแนะนำให้ถูกต้องและอยู่ปัจจุบัน ดังนั้น ควรปฏิบัติตามที่แนะนำ

### BACKGROUND

On November 15, 1985, "Recommendations for Preventing Transmission of Infection with Human T-Lymphotropic Virus Type III/Lymphadenopathy-Associated Virus in the Workplace," was published (1). That document gave particular emphasis to health-care settings and indicated that formulation of further specific recommendations for preventing human T-lymphotropic virus type III/lymphadenopathy-associated virus (HTLV-III/LAV) transmission applicable to health-care workers (HCWs) who perform invasive procedures was in progress.

Toward that end, a 2-day meeting was held at CDC to discuss draft recommendations applicable to individuals who perform or assist in invasive procedures.\* Following the meeting, revised draft recommendations for HCWs who have contact with tissues or mucous membranes while performing or assisting in operative, obstetric, or dental invasive procedures were sent to participants for comment. In addition, 10 physicians with expertise in infectious diseases and the epidemiology of HTLV-III/LAV infection were consulted to determine whether they felt additional measures or precautions beyond those recommended below were indicated. These 10 experts did not feel that additional recommendations or precautions were indicated.

\*The following organizations were represented at the meeting: American Academy of Family Physicians; American Academy of Periodontology; American Association of Dental Schools; American Association of Medical Colleges; American Association of Oral and Maxillofacial Surgeons; American Association of Physicians for Human Rights; American College of Emergency Physicians; American College of Nurse Midwives; American College of Obstetricians and Gynecologists; American College of Surgeons; American Dental Association; American Dental Hygienists Association; American Hospital Association; American Medical Association; American Nurses' Association; American Public Health Association; Association for Practitioners in Infection Control; Association of Operating Room Nurses; Association of State and Territorial Health Officials; Conference of State and Territorial Epidemiologists; U.S. Food and Drug Administration; Infectious Diseases Society of America; National Association of County Health Officials; National Dental Association; National Institutes of Health; National Medical Association; Nurses Association of the American College of Obstetricians and Gynecologists; Society of Hospital Epidemiologists of America; Surgical Infection Society; and United States Conference of Local Health Officers. In addition, a hospital administrator, a hospital medical director, and representatives from CDC participated in the meeting. These recommendations may not reflect the views of all individual consultants or the organizations they represented.

**DEFINITIONS**

In this document, an operative procedure is defined as surgical entry into tissues, cavities, or organs or repair of major traumatic injuries in an operating or delivery room, emergency department, or outpatient setting, including both physicians' and dentists' offices. An obstetric procedure is defined as a vaginal or cesarean delivery or other invasive obstetric procedure where bleeding may occur. A dental procedure is defined as the manipulation, cutting, or removal of any oral or perioral tissues, including tooth structure, where bleeding occurs or the potential for bleeding exists.

**RECOMMENDATIONS**

There have been no reports of HTLV-III/LAV transmission from an HCW to a patient or from a patient to an HCW during operative, obstetric, or dental invasive procedures. Nevertheless, special emphasis should be placed on the following precautions to prevent transmission of bloodborne agents between all patients and all HCWs who perform or assist in invasive procedures.

1. All HCWs who perform or assist in operative, obstetric, or dental invasive procedures must be educated regarding the epidemiology, modes of transmission, and prevention of HTLV-III/LAV infection and the need for routine use of appropriate barrier precautions during procedures and when handling instruments contaminated with blood after procedures.
2. All HCWs who perform or assist in invasive procedures must wear gloves when touching mucous membranes or nonintact skin of all patients and use other appropriate barrier precautions when indicated (e.g., masks, eye coverings, and gowns, if aerosolization or splashes are likely to occur). In the dental setting, as in the operative and obstetric setting, gloves must be worn for touching all mucous membranes and changed between all patient contacts. If a glove is torn or a needlestick or other injury occurs, the glove must be changed as promptly as safety permits and the needle or instrument removed from the sterile field.
3. All HCWs who perform or assist in vaginal or cesarean deliveries must use appropriate barrier precautions (e.g., gloves and gowns) when handling the placenta or the infant until blood and amniotic fluid have been removed from the infant's skin. Recommendations for assisting in the prevention of perinatal transmission of HTLV-III/LAV have been published (2).
4. All HCWs who perform or assist in invasive procedures must use extraordinary care to prevent injuries to hands caused by needles, scalpels, and other sharp instruments or devices during procedures; when cleaning used instruments; during disposal of used, needles; and when handling sharp instruments following procedures. After use, disposable syringes and needles, scalpel blades, and other sharp items must be placed in puncture-resistant containers for disposal. To prevent needlestick injuries, needles should not be recapped; purposefully bent or broken; removed from disposable syringes; or otherwise manipulated by hand. No data are currently available from controlled studies examining the effect, if any, of the use of needle-cutting devices on the incidence of needlestick injuries.
5. If an incident occurs during an invasive procedure that results in exposure of a patient to the blood of an HCW, the patient should be informed of the incident, and previous recommendations for management of such exposures (1) should be followed.
6. No HCW who has exudative lesions or weeping dermatitis should perform or assist in invasive procedures or other direct patient-care activities or handle equipment used for patient care.
7. All HCWs with evidence of any illness that may compromise their ability to adequately and safely perform invasive procedures should be evaluated medically to determine whether they are physically and mentally competent to perform invasive procedures.
8. Routine serologic testing for evidence of HTLV-III/LAV infection is not necessary for HCWs who perform or assist in invasive procedures or for patients undergoing invasive procedures, since the risk of transmission in this setting is so low. Results of such routine testing would not practically supplement the precautions recommended above in further reducing the negligible risk of transmission during operative, obstetric, or dental invasive procedures.

Previous recommendations (1,3,4) should be consulted for: (1) preventing transmission of HTLV-III/LAV infection from HCWs to patients and patients to HCWs in health-care settings other than those described in this document; (2) preventing transmission from patient to patient; (3) sterilizing, disinfecting, housekeeping, and disposing of waste; and (4) managing parenteral and mucous-membrane exposures of HCWs and patients. Previously recommended precautions (1) are also applicable to HCWs performing or assisting in invasive procedures.

#### References

1. CDC. Recommendations for preventing transmission of infection with human T-lymphotropic virus type III/lymphadenopathy-associated virus in the workplace. MMWR 1985;34:682-6, 691-5.
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