

The Etiology of Non-leuetic Soft Chancre

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OBJECTIVE: Soft chancre is reported to be the second most common venereal disease among United States troops operating in SE Asia. The diagnosis and treatment of this lesion is accomplished without any bacteriological studies in almost all instances. Treatment is often long and must often be altered several times to effect a cure.

DESCRIPTION: This laboratory is currently studying the microorganisms present in these lesions. Patients are referred to this laboratory from the US Hospital in Bangkok for dark field examination and extensive culture. All lesions studied to this date are from male patients.

PROGRESS: Specimens of pus and exudate are inoculated onto Thayer—Martin media, on sheep blood agar, and on Eugonagar with 25% fresh rabbit blood. In most instances inoculations are made on fresh rabbit blood clots and on patients blood clots. Plates are incubated at 37C aerobically and in a brewer jar. Many of the lesions are quite insignificant and are presented the first day they were noticed. In these early lesions only minute amounts of exudate can be obtained.

To date, 62 lesions have been examined. None of these have demonstrated any spirochetal forms although one patient subsequently developed a positive VDRL and the characteristic skin lesions of secondary syphilis.

From the 62 lesions studied, 8 have revealed "suspected" Haemophilus ducreyi and 1 a "suspected" H. vaginalis. The most recovered organisms have been Staphylococcus epidermidis (39) and diphtheroid—like bacteria (30). Alpha haemolytic streptococcus was identified in 15 lesions and S. aureus in 14. The other bacteria identified were common skin inhabitants. These data are presented in Table 1.

SUMMARY: This study appears to indicate several facts. First, there is no adequate method of identifying H. ducreyi. It is noted in this laboratory as being a Haemophilus species that does not fit any of the biochemical characteristics of any other member of the species. Second, a diphtheroid organism is usually associated with serious lesions. Third, from histories obtained from the patients, nearly all of these lesions existed prior to intercourse, usually as a small blister, pimple, or 'rubbed raw' abrasion.

This laboratory is attempting to devise a schema to firmly identify H. ducreyi. At present an organism is designated as H. ducreyi because of its morphology, affinity for X or V factor, and inability to reproduce in any carbohydrate broth. We plan to add specific growth factors to diagnostic media and determine a biochemical and fermentative profile for H. ducreyi.

In order to evaluate the possibility of synergisms, subcutaneous inoculations of the various organisms usually recovered from lesions have been studied. Inoculations of H. ducreyi, H. vaginalis and diphtheroids have produced chancre—like lesions in rabbits. Additional work on the synergisms that may be involved in this disease is being conducted.

It is interesting that nearly all patients report a pre-existing lesion prior to intercourse. None deny sexual contact. Some speak of recurring lesions that resemble those reported as due to Herpes progentialis. It is quite possible that many of the lesions are secondary infections due the normal vaginal flora. H. vaginalis, which may be a variant of H. ducreyi, has been recovered from 5.4% of 421 endocervix cultures and from 8.9% of 279 urethral cultures in this laboratory. We have recovered this organism from 4 of 83 male patients with urethritis. These data are presented in Table 2.

Soft chancre continues to be a serious venereal disease in SE Asia. We have some data that suggests a possible synergistic secondary infection of normal vaginal flora. Additional study and the development of an identification scheme for H. ducreyi and H. vaginalis are necessary if directed antibiotic therapy is desired for the treatment of non-leucetic soft chancre.

Table 1.
Organisms Isolated from 62 Penile Lesions Resembling Soft Chancre

Dark field positive for spirochetes	None
Suspected <u>Haemophilus ducreyi</u>	9
<u>Staphylococcus aureus</u> (coagulase positive)	14
<u>Staphylococcus epidermidis</u> (coagulase negative)	39
Diphtheroids	30
Alpha hemolytic streptococcus	15
Non hemolytic streptococcus	8
Beta hemolytic streptococcus	2
<u>Streptococcus fecalis</u>	5
<u>Micrococcus spp.</u>	5
<u>Escherichia coli</u>	4
<u>Enterobacter cloacae</u>	8
<u>Enterobacter aerogenes</u>	4
<u>Enterobacter spp.</u>	2
<u>Proteus spp.</u>	2
<u>Pseudomonas spp.</u>	3
<u>Haemophilus spp.</u> (vaginalis)	1

Table 2.
Haemophilus spp. (vaginalis) Isolated from Female Patients Seen at a Venereal Disease Control Clinic and from 83 Male Urethral Discharges

Site	Total specimens	No. positive for <u>Haemophilus spp.</u> (vaginalis)
Endocervix	421	29
Urethra	279	22
Rectum (Feb—Mar 71)	132	5
Urethral discharge	83	4