Sexually transmitted diseases in Riyadh, Saudi Arabia
A study of patients attending a teaching hospital clinic

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SUMMARY Of 716 men attending consecutively a dermatovenereological clinic in Riyadh, Saudi Arabia, over a period of a year 70.1% had non-specific genital infection, a figure which is four times that for gonorrhoea and 13 times that for syphilis. Most of the patients were single men aged between 20 and 29 years and had acquired their infections abroad. Although Riyadh is a cosmopolitan city with a large foreign population 79% of the infections occurred in local inhabitants.

Introduction

Riyadh, the capital of Saudi Arabia, is a cosmopolitan city with an estimated population of one million people. It is expanding rapidly as a result of the oil boom and is called the “city of cranes” because of the amount of construction work in progress. Development projects have attracted workers from various countries, mainly Egyptians, Yemenis, Koreans, Philippinos, Pakistanis, Indians, Americans, and Europeans.

The majority of the population was not born in Riyadh, and only one in eight residents over 12 years of age is native to the city. Of the total population 50% are under 20 years of age and 57% are men. The average age for marriage is between 16 and 18 years for girls and between 20 and 25 for men.¹ There is a stringent moral code among the native population because of strict adherence to Islam; premarital and extramarital sexual relationships are not only forbidden but are a criminal offence. Nevertheless, sexually transmitted disease (STD) is prevalent in Riyadh. Some reasons for this are extensive travelling abroad by local inhabitants, affluence, the provision of paid home-leave for most expatriates, and long separation of some foreign employees from their wives.

Riyadh has four major hospitals, which provide facilities for the investigation and treatment of STDs. Some patients seek treatment from private practitioners, others consult pharmacists and native doctors.

Patients and methods

Seven hundred and sixteen men were seen consecutively in the dermatovenereological clinic of the King Abdul Aziz Teaching Hospital, Riyadh, between December 1978 and December 1979.

BACTERIOLOGY

Urethral specimens were collected from all men who presented with a urethral discharge. A sterile cotton-wool swab was introduced into the anterior urethra and gently rotated; the swab was placed in a transport medium and sent to the microbiology department where it was plated on Thayer-Martin medium (Oxoid) and on chocolate agar. After incubation in a candle jar at 37°C for 24-48 hours gonococci were identified by their morphology and by oxidase and sugar fermentation tests. The sensitivity of isolates was tested by Mast multidiscs against penicillin (1 unit), erythromycin (15 μg), cephalosporin (5 μg), gentamicin (10 μg), and ampicillin (10 μg). All strains were tested for β-lactamase production with intra-lactam strips by the method of Wheldon and Slack.²

MICROSCOPY AND SEROLOGY

Smears made from the urethral swabs were stained by Gram’s method and examined for the presence of Gram-negative intracellular diplococci. Wet preparations of discharge were examined for Trichomonas vaginalis and Candida albicans. The urine of some patients presenting with haematuria was examined for Schistosoma haematobium.³
Venereal Disease Research Laboratory, fluorescent treponemal antibody-absorption, and Treponema pallidum haemagglutination tests were performed on all patients. Darkground examinations and Gram-staining of smears for Haemophilus ducreyi were carried out on genital ulcers.

Results

DIAGNOSES
The diagnoses of the 716 patients are shown in the table. The commonest STD was non-specific urethritis (66.7%); this, with post-gonococcal urethritis (3.4%), was about four times as common as gonorrhoea. Of the strains of gonococci tested, 23 were resistant to penicillin with minimum inhibitory concentrations (MICs) ranging from 0.25 to $>4 \mu g/ml$; 10 of these strains produced $\beta$-lactamase. Syphilis was diagnosed in 39 (5.4%) patients; these comprised 16 primary, 12 secondary, five early latent, and six late latent cases. Only small numbers of the other STDs were seen.

<table>
<thead>
<tr>
<th>Diagnoses</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syphilis</td>
<td>39</td>
<td>5.4</td>
</tr>
<tr>
<td>Gonorrhoea</td>
<td>132</td>
<td>18.4</td>
</tr>
<tr>
<td>Non-specific urethritis</td>
<td>478</td>
<td>66.7</td>
</tr>
<tr>
<td>Post-gonococcal urethritis</td>
<td>24</td>
<td>3.4</td>
</tr>
<tr>
<td>Pediculosis pubis*</td>
<td>10</td>
<td>1.4</td>
</tr>
<tr>
<td>Genital warts</td>
<td>9</td>
<td>1.3</td>
</tr>
<tr>
<td>Chancroid</td>
<td>9</td>
<td>1.3</td>
</tr>
<tr>
<td>Candidosis</td>
<td>9</td>
<td>1.3</td>
</tr>
<tr>
<td>Herpes simplex</td>
<td>4</td>
<td>0.6</td>
</tr>
<tr>
<td>Molluscum contagiosum†</td>
<td>2</td>
<td>0.3</td>
</tr>
<tr>
<td>Total</td>
<td>716</td>
<td>100</td>
</tr>
</tbody>
</table>

*Four of these cases were associated with NSU and two with gonorrhoea
†One case was associated with NSU and one with gonorrhoea

EPIEIDOLOGY
Infection was contracted from a prostitute abroad or from a casual partner in Saudi Arabia in 86.5% of the cases; in 13.5% the source of infection was the spouse.

Of the adult patients, 489 (68.2%) were aged between 20 and 29 years, and 222 (31.8%) were married. The nationality of the patients was: Saudis, 366 (79%); Yemenis, 44 (6.2%); Sudanese, 23 (3.2%); Egyptians, 46 (6.5%); and others, 37 (5.1%). Most of the patients were students or from the professional classes, but syphilis and gonorrhoea were also common among skilled and unskilled labourers. Although Riyadh is a cosmopolitan city with a large number of foreigners local inhabitants contributed 79% of the total cases of STD.

Discussion
Most of the patients (68.2%) were aged between 20 and 29 years, a higher proportion than that reported elsewhere. The other STDs comprised only 6% of the total, a lower figure than that reported in England. No cases of trichomonal infection were seen, although tests were carried out to detect this organism.

Accurate statistics on the prevalence of STDs in Saudi Arabia are not available because these are not notifiable diseases. Furthermore, there are no specialised centres for the diagnosis and treatment of these conditions. The largest groups at risk are students and skilled and unskilled workers; these groups should receive proper health education.

Special attention should be directed to women who do not generally attend clinics and, when they do so, often do not complete treatment.

References
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