Abstracts

These selected abstracts and titles from the world literature are arranged in the following sections:

Syphilis and other treponematoses
(Clinical and therapy; serology and biological false-positive phenomenon; pathology and experimental)

Gonorrhoea
(Clinical; microbiology; therapy)

Non-specific genital infection

Reiter's disease

Syphilis and other treponematoses (clinical and therapy)

Epidemiology of infectious syphilis at a tertiary hospital
LM DRUSIN, B TOPFOLSTEIN, AND E LEVYZOMBEK (Department of Epidemiology, New York Hospital, USA). Arch Intern Med 1979; 139:901-4.

Hepatic ultrastructure in secondary syphilis
SEH BROOKS, BN HANCHARD, STERRY, AND JJ ANDRETSCH (University of the West Indies, Jamaica). Arch Pathol Lab Med 1979; 103:451-5.

Membranous glomerulonephritis in congenital syphilis

Syphilis (serology and biological false-positive phenomenon)

Diagnostic evaluation of syphilis during pregnancy

Utility of the FTA-ABS test of cerebrospinal fluid in the diagnosis of neurosyphilis

Syphilis (pathology and experimental)

Endemic syphilis: passive transfer of resistance with serum and cells in hamsters
RF SCHELL, JK CHAN, AND JLLEFROCK (Albany Medical Center Hospital, New York, USA). J Infect Dis 1979; 140:378-83.

Endemic syphilis was studied in hamsters to determine whether serum or cells from animals rendered resistant to infection with Treponema pallidum (strain Bosnia) could confer resistance to syphilis in normal animals. The hamsters received either immune or normal serum at intervals for four weeks. Three days after the first injection they were challenged. A third group of animals received no serum and were similarly challenged with T pallidum. Lesions developed in all animals except those vaccinated with immune serum. The lymph nodes of the resistant animals contained a large number of treponemes but this was less than in the other two groups. Passive transfer of resistance with spleen cells using either normal or immunised hamsters showed after challenge that those animals having received cells from immunised hamsters did not develop syphilitic lesions. Treatment of the immune spleen cells with antilymphocytic serum and complement abolished the ability to transfer resistance. This appears to be the first direct evidence that thymus-derived cells are involved in resistance to syphilis.

G W Csonka

Trichomoniase
Candidiasis
Genital herpes
Other sexually transmitted diseases
Public health and social aspects
Miscellaneous

Suppression of lymphocyte response to concanavalin-A by mucopolysaccharide material from Treponema pallidum-infected rabbits

The effect of reducing and other agents on the motility of Treponema pallidum in an acellular culture medium

Gonorrhoea (clinical)

Gonococcal vulvovaginitis in prepubertal girls

Gonococcal pelvic inflammatory disease: economic impact in New York, Medicaid 1975

Gonococcal endocarditis in the antibiotic era
DB COOKE, DARENSBERG, JMFELNER, D RIMLAND, AND LM LESSER (Emory University School of Medicine, Atlanta, Georgia, USA). Arch Intern Med 1979; 139:1247-50.
Before the introduction of penicillin up to 26% of cases of infectious endocarditis were due to Neisseria gonorrhoeae. Recently this condition, which had almost disappeared, has started to increase again (three cases are described) and should be suspected in any patient under the age of 30 and without pre-existing heart disease. It most commonly affects the aortic wall and may show a long latent period after the primary infection. As many as six blood cultures may be necessary to establish the aetiology. If the patient is not allergic to penicillin large doses should be given for 4-6 weeks. If the patient is allergic to penicillin desensitisation followed by penicillin therapy is preferable to other antibiotics. In two of the present cases aortic valve replacement became necessary.

G W Csonka

Gonorrhoea (microbiology)

In-vitro susceptibility of penicillinase-producing Neisseria gonorrhoeae to a select group of antimicrobial agents, alone and in combination (letter)

In a letter, the authors report the in-vitro susceptibility of 10 strains of β-lactamase-producing Neisseria gonorrhoeae to various antimicrobial agents. The strains were all susceptible to spectinomycin, trimethoprim/sulphamethoxazole (TMP/SMZ) in combination, cefazolin, amikacin, and, with one exception, to tetracycline. All strains were highly resistant to penicillin G, ampicillin, and, with one exception, streptomycin. A synergistic effect of the TMP/SMZ combination in a ratio of 1:19 reduced inhibitory concentrations to 0-31 and 5-9 mg/L respectively compared with >5 and >95 mg/L separately. Previous studies by the same author showed that a single dose of nine tablets of commercial TMP/SMZ (ratio 80 mg : 400 mg) will achieve blood concentrations of 2-16 and 31-7 mg/L respectively at 24 hours, well above the inhibitory concentrations effective against β-lactamase gonococci used in the study. Oral treatment on a single-dose basis may therefore be possible for these organisms.

Brian Evans

Evaluation of five serologic tests for antibody to Neisseria gonorrhoeae

Production of β-lactamase by a strain of Neisseria gonorrhoeae when cultured in the presence of ethidium bromide (letter)

β-lactamase-inhibitors—a novel approach (editorial)

Protection by monospecific gonococcal antisera of the chick embryo challenged with Neisseria gonorrhoeae

Sensitivity of Neisseria gonorrhoeae to partially purified R-type pycnones and a possible approach to epidemiological typing

Comparison of a slide coagglutination technique with the Minitek system for confirmation of Neisseria gonorrhoeae

Antibodies to Neisseria gonorrhoeae: a study of the urethral exudates of 232 men

Comparison of the penicillin-binding proteins of different strains of Neisseria gonorrhoeae

Assessment of attachment of Neisseria gonorrhoeae to HeLa cells by double radiolabelling
ER Gubish, ML Mace, SM Steiner, and RP Williams (Baylor University, Texas, USA). Infect Immun 1979; 25:1043-50.

Co- transformation of temperature sensitivity and nutritional markers in Neisseria gonorrhoeae

Evaluation of a culture procedure for identification of Neisseria gonorrhoeae

Effects of low ampicillin concentrations on penicillin-sensitive and β-lactamase-producing strains of Neisseria gonorrhoeae

Screening by culture for the detection of gonorrhoea in women

Killing of Neisseria gonorrhoeae by human polymorphonuclear neutrophil granule extracts

Phenotypically determined resistance of Neisseria gonorrhoeae to normal human serum: environmental factors in subcutaneous chambers in guinea pigs

Variations in surface protein composition associated with virulence properties in opacity types of Neisseria gonorrhoeae
PR Lambden, JE Heckels, LT James, and PJ Watt (University of Southampton, UK). J Gen Microbiol 1979; 114:305-12.

The ecology of gonococcal plasmids

Gonorrhoea (therapy)

Cefoxitin treatment of penicillinase-producing Neisseria gonorrhoeae
Abstracts

Cefoxitin is a semisynthetic cephamycin unaffected by \(\beta\)-lactamase. A trial was reported in which cefoxitin 2 G I.M. was compared with procaine penicillin G 4·8 megaunits i.m. in a randomised sequence. One hundred and seven men with culture-positive urethral gonorrhoea attended for follow up. The 54 patients treated with cefoxitin were all cured, although four had no follow-up culture performed. However, of the 53 treated with penicillin only 34 were cured, and of the 19 who failed 17 had \(\beta\)-lactamase-producing organisms; in the penicillin-treated group 22 patients had \(\beta\)-lactamase-positive organisms and in the cefoxitin-treated group, 21. Five patients who received cefoxitin complained of pain at the injection site despite reconstitution in 4 ml 0·5% lignocaine. Cefoxitin is claimed to be an effective alternative to spectinomycin for uncomplicated gonorrhoea caused by \(\beta\)-lactamase producing strains.

Brian Evans

Successful treatment with cefaclor of gonococcal urethritis in men
VA SPAGNA, RL PERKINS, AND RB PRIOR (Ohio State University, USA). Sex Transm Dis 1979; 6:211-3.

Non-specific genital infection

Response to treatment of chlamydial infection of the cervix (letter)

In a short report the response to treatment of chlamydial infection of the uterine cervix was examined by comparing post-treatment isolates in 59 women treated with oxytetracycline or doxycycline for one week with the same drugs for 14·21 days.

Chlamydia was isolated from nine patients after treatment, five having taken tetracyclines for one week and four for 2-3 weeks. Reinfection was considered a problem in seven women, as two had resumed intercourse with regular untreated partners and five, initially negative, had positive results on subsequent examination, again after resuming intercourse with regular untreated partners.

Although the study was small it showed that a week of tetracycline is as effective in eradicating chlamydia as a three-week course and re-emphasised the importance of investigating and treating regular sexual partners with sub-group A chlamydial genital infection.

R S Pattman

Genital mycoplasma infection: intrauterine infection: pathologic study of the fetus and placenta

Mycoplasma infection was present in the fetuses from three spontaneous abortions and in one neonate born in the second trimester. Gross examination revealed in most cases a severely infected placenta and membranes with a fetus of normal appearance. The fetal infection presumably followed placental involvement and appeared to have been acquired shortly before delivery. Genital mycoplasmas, Ureaplasma urealyticum, or Mycoplasma hominis were isolated from the placentas and the fetal tissues, and genital tracts of the mothers. Isolation of the mycoplasmas from the liver indicated that bloodstream dissemination of these organisms occurred in the fetus. In the fetus the pathological changes were variable. Lesions were identified in the lung by scanning electron microscopy of the bronchial tree in two cases and were accompanied by interstitial pneumonia. An abnormally dilated left ventricle suggesting cardiomyopathy was observed in one case.

Authors' summary

Delayed hypersensitivity to Chlamydia trachomatis: cause of chronic prostatitis? (letter)

The authors of this case report describe the clinical course of a patient with the clinical features of chronic prostatitis. A 36-year-old man presented with a three-year history of pain in the perineum, lower back, and both testes; exacerbation and remission of these symptoms were noted during that period. The prostate was enlarged and tender, and an epididymitis was also noted. Although Chlamydia trachomatis was not isolated from the urethra of the patient nor from the cervix of his wife, chlamydial antibodies were detected in the sera from both. That the patient had developed delayed hypersensitivity to chlamydial antigens was demonstrated by a skin test. The patient's clinical condition improved when he was treated with a 5½-month course of erythromycin.

A McMillan

Survival of Ureaplasma urealyticum on different kinds of swabs
SA POULIN, RB KUNDSIN, AND HW HORNE (Peter Brent Brigham Hospital, Boston, USA). J Clin Microbiol 1979; 10: 601-3.

The survival of Ureaplasma urealyticum on five different types of swab routinely used for obtaining clinical specimens was investigated with 16 ureaplasma-positive urine specimens as inoculum: each type of swab was tested with two (minimum) to four (maximum) urine samples. Swabs charged with ureaplasmas were rolled on A7 agar medium and then placed in Ford liquid medium. With certain types of swabs, colonies were obtained on A7 agar although the corresponding Ford broth cultures gave negative results. Neither cotton-tip or pledget, nor rayon-tip, nor calcium-alginate tip, nor aluminium shaft, nor polyester applicator was by itself inhibitory to the ureaplasmas. However, the wooden applicator stick exerted an inhibitory effect sufficient to prevent a colour change in all ureaplasma-positive urine specimens. Ureaplasmas remained viable, since negative broths when subcultured after 18 hours produced colonies on A7 agar. After storage at room temperature for longer than one hour survival of ureaplasmas was poor on all swabs.

In a clinical trial cervical swabs were taken from 54 patients with a cotton-tipped wooden applicator swab and a rayon-tipped swab wrapped around a polyester applicator; both A7 agar and Ford liquid broth were inoculated with each swab. The latter swabs gave a positive result in 25 patients, both on A7 medium and in Ford broth, but the wooden applicator swabs, although positive with A7 medium in 25 patients, yielded only 11 positive broth culture results.

H Young

Rosamicin, a macrolide with in-vitro activity against Ureaplasma urealyticum

Genital Chlamydia trachomatis infections with cervical atypia

Preparation of antigens for microimmunofluorescence testing for antichlamydial antibodies (letter)
Reiter’s disease

The clinical features and HLA associations of reactive arthritis with nongonococcal urethritis


Fifty-seven patients with arthritis associated with nongonococcal genital infection have been studied. Synovitis characteristically affected one or a few joints, especially the knee, ankle, or metatarsophalangeal joints, and was accompanied by tenosynovitis and enthesisopathies, each in about one-third of the patients. A quarter of the patients had ocular, cutaneous, or mucus membrane lesions (Reiter’s syndrome). Although six patients developed a chronic or relapsing course, the average duration of the acute episode in most was three to five months. Available evidence strongly suggests that infection following sexual intercourse, usually but not always with a new partner, was instrumental in the initiation of the disease. We have suggested the term “sexually acquired reactive arthritis (SARA)” to emphasize the mode of acquisition of the disease, and note that similar syndromes are seen associated with gut infection. We consider that usage of the term Reiter’s syndrome is correctly applied to only those cases which exhibit the characteristic triad of urethritis, arthritis, and conjunctivitis with or without other cutaneous and mucous membrane lesions. Thirty-six of the 54 patients who were HLA-typed (67%) possessed the antigen HLA-B27. Of 30, who presented directly to a rheumatology unit, 25 (83%) were HLA-B27-positive. The other 24 patients initially attended a venereology clinic and only 11 (46%) of these bore the antigen. This appears to reflect the severity of the disease, HLA-B27-positive patients having a significantly longer duration of disease symptoms and a higher frequency of extra-articular manifestations than those lacking this antigen.

Authors’ summary

Ankylosing spondylitis and chlamydial infection in apparently healthy HLA-B27 blood donors


HLA-B27 in patients with seronegative spondarthritides

AN MALAVIYA, NK MEHRA, G ADHAR, K JINDAL, S BHARGAVA, RK BATT, MC VAIHYA, AND B SANKANAN (Safdarjung Hospital, New Dehli, India). J Rheumatol 1979; 6: 413-6.

Reiter’s syndrome (editorial)

Lancer 1979; ii: 567.

Reiter’s syndrome after salmonella infection—occurrence in HLA-B27-positive brothers


British Journal of Venereal Diseases

Trichomoniasis

Lack of evidence for cancer due to use of metronidazole


Candidosis

Requirement of heat-labile opsonins for maximal phagocytosis of Candida albicans


Using a radiometric method, the requirement of heat-labile opsonins for phagocytosis was investigated. It was shown that these opsonins were required for maximal phagocytosis of two serologically distinct strains and 10 clinical isolates of C. albicans. There was a 50% loss in the phagocytic potential of the test system when serum which had previously been heated to 56°C for 30 minutes was used in place of untreated serum.

A McMillan

Biochemical identification of clinically important yeasts


Assimilation of protocatechue acid and p-hydroxybenzoic acid as an aid to the laboratory identification of Candida parapsilosis and other medically important yeasts

BH COOPER AND GA LAND (Baylor University, Dallas, Texas, USA). J Clin Microbiol 1979; 10: 343-5.

Abortion associated with intrauterine infection by Candida albicans (case report)


Purification of a mannan from Candida albicans which activates serum complement

**Genital herpes**


Comparative prevalence of subclinical cytomegalovirus and herpes simplex virus infections in the genital and urinary tracts of low-income, urban women GE KNOX, RF PASS, DW REYNOLDS, S STAGNO, AND CA ALFORD (University of Alabama, USA). *J Infect Dis* 1979; 140:419-22.

**Subclinical herpes simplex genitalis infection in the perinatal period**


**Other sexually transmitted diseases**

Aetiological association of virus hepatitis and primary carcinoma of the liver in Germany B EHRLICH *Dtsch Med Wochenschrft* 1979; 104:1316.

Aetiological association of virus hepatitis B and carcinoma of the liver has been repeatedly suggested. In the present series of 25 patients (19 men) with confirmed primary carcinoma of the liver a high proportion were either B antigen- or antibody-positive and 54.5% had had intimate contact with B hepatitis in the past. Similarly, a high proportion of cases of cirrhosis of the liver, which was also present in 22 of the group with primary carcinoma of the liver, showed this close association with B hepatitis. A control group of 548 normal individuals showed a significantly lower presence of hepatitis B antigen or antibody and only 7.4% had close contact with active hepatitis B. These results support other reports that hepatitis B virus infection is an important factor in cirrhosis of the liver, which may progress to carcinoma of the liver. (If this association is definitely confirmed, Australia antigen B hepatitis becomes one of the most sinister conditions so commonly encountered in clinics dealing with sexually transmitted diseases).

**Treatment of infestation with Phthirius pubis: comparative efficacies of synergized pyrethryns and benzene hexachloride**


A new non-prescription pediculicidal liquid, essentially 0-3 pyrethrins synergised by 3% piperonyl butoxide, was compared with 1% y-benzene hexachloride, only available on prescription in the USA, for the treatment of infestation with *Phthirius pubis*.

Thirty adult patients with *P pubis* infestation were divided into two groups matched for age, sex, and race and randomly treated with either a single 10-minute application of the synergized-pyrethrin liquid or a single 12-hour application of y-benzene hexachloride lotion. The response to treatment was assessed by examining the pubic hair and water used to rinse the pubic area for lice and nits immediately after the prescribed time period and observing the patients after a week.

All adult lice and nymphs were dead at the conclusion of a single treatment in both groups and after a week all patients were free from lice, nymphs, and viable nits. No adverse side effects occurred after application of either medication.

It was concluded that the synergized-pyrethrin preparation is an advancement, as it appears to be free of toxicity problems associated with chlorinated hydrocarbons and in the USA is available without prescription, enabling self-treatment without the embarrassment of seeking medical advice.

**Chronic hepatitis B infection in male homosexuals**


Ten cases of hepatitis B virus infection were identified among asymptomatic male homosexuals. These patients shared a number of characteristics: a subclinical origin and course of infection; persistence of HBsAg for periods exceeding six to 25 months; persistent GPT elevation of 2-5 times upper normal limit; and morphological changes in the liver with portal and parenchymal inflammation (chronic persistent hepatitis, six cases; non-specific reactive hepatitis, two cases; cirrhosis and acute hepatitis with signs of chronicity, one case each). HBcAg was found in six cases, anti-HBe in none.

These results indicate that screening for hepatitis B should be performed whenever these individuals seek medical attention in order to detect asymptomatic chronic liver diseases and to detect these silent vectors of an infection that is at present increasing among homosexuals.

**Authors' summary**

*Neisseria meningitidis* urethritis MA MILLER, P MILLIKIN, PS GRIFFIN, RA SEXTON, AND M YOUSUF (Peoria School of Medicine, Illinois, USA). *JAMA* 1979; 242:1656-7.

*Neisseria meningitidis*. Probable pathogen in two related cases of urethritis, epididymitis, and acute pelvic inflammatory disease DC WILLIAM, YM FELMAN, AND MC CORSARO (Bureau of Venerable Disease Control, New York, USA). *JAMA* 1979; 242:1653-4.


**Virus-specific and anticellular antibodies in molluscum contagiosum**

PV SHIRODARIA, RS MATTHEWS, AND M SAMUEL (Queen’s University, Belfast, N Ireland). *Br J Dermatol* 1979; 101:133-40.

**Primary extragenital disseminated cutaneous donovanosis**


**Public health and social aspects**

Genital bacteriology—comparative study of premenopausal women with postmenopausal women
NG Osborne, RC Wright, and L Grubin

In view of reports that premenopausal women are at a higher risk than postmenopausal women of postoperative infection following vaginal hysterectomy a study was designed to compare the genital flora of premenopausal women less than 36 years of age with that of postmenopausal women over 55 years of age. All of the women admitted to the study attended a private clinic and were healthy and free of any genital symptoms. Bacteriological investigation included culture for aerobes, anaerobes, and mycoplasmas. No group of organisms was found to be significantly predominant in any set of patients and no statistically significant differences were found in the number of species of microorganisms isolated from the cervix and vagina of premenopausal and postmenopausal women ($p>0.5$). These results are interpreted to suggest that there are factors in addition to bacteria which influence the rate of postoperative infection. Other factors which have been proposed to account for the differences in the risk of postoperative infection in premenopausal and postmenopausal patients are discussed, as is the possible role of the host defence system. (A study of the microbial flora of premenopausal and postmenopausal patients before undergoing hysterectomy would be of interest.)

H Young

Quantitative microbiology of human vulva
RAly, MB Britz, and H Mailback

The microbial flora of the vulva is described and compared with the flora of the forearm by utilising the detergent scrub method. Microbial counts were higher on the vulva ($2.8 \times 10^6$) than on the forearm ($6.4 \times 10^5$). Lipophilic diphtheroids, coagulase-negative staphylococci, micrococci, non-lipophilic diphtheroids, and lactobacilli formed the dominant flora of the vulva. Streptococci, Gram-negative rods, and yeasts were also noted. The highest incidence of Staphylococcus aureus was noted on the vulva (67%) followed by the perianal region (30%), nose (30%), and the forearm (11%).

Authors' summary

Do contraceptives influence the incidence of acute pelvic inflammatory disease in women with gonorrhoea
GRyden, LF Fahraeus, LMolin, and KAHMAN (Linkoping University Hospital, Sweden). Contraception 1979; 20:149-55.

The incidence of pelvic inflammatory disease among contraceptive and non-contraceptive users was studied in 672 patients with gonorrhoea. Pelvic inflammatory disease was diagnosed in 87 and confirmed by laparoscopy. There was a significantly lower incidence of pelvic inflammatory disease in the group using hormonal contraception (8.8%) than in those using copper intrauterine devices (IUDs) (23.5%) ($p<0.001$) and in those using neither hormones nor IUDs (15.1%) ($p<0.02$).

There were 20 cases of pelvic inflammatory disease in the 85 patients using IUDs. Six of these became ill within three weeks of insertion of the IUD; it was not known whether or not these patients had had genitourinary gonorrhoea before insertion. If these patients are excluded, the risk of pelvic inflammatory disease for women with an IUD for longer than three weeks was not greater than for the non-IUD and non-hormonal users, but it was still greater than for the group using hormonal contraceptives ($p<0.05$).

J M Harvey

British Journal of Venereal Diseases

Inhibition of Haemophilus vaginalis (Corynebacterium vaginale) by metronidazole, tetracycline and ampicillin
ED Ralp, TW Austin, FLM Pattison, and BC Schieven

The etiology and pathogenesis of pelvic inflammatory disease (editorial)
FG Cunningham (University of Texas, USA). Sex Transm Dis 1979; 6:221-3.

The etiology of acute pelvic inflammatory disease (editorial)
DA Eschenbach and KK Holmes

Lactobacillus for vulvovaginitis (letter)
BSandler (Manchester, UK). Lancet 1979; ii:791-2

Prostatitis, prostatititis or pelvic floor tension myalgia
JW Segura, JL O'neitz, and LF Greene

Use of vaginal cleansing kit in non-specific vaginitis

Behce's syndrome (editorial)

Relationship between sexual intercourse and urinary tract infection in women attending a clinic for sexually transmitted diseases
MC Kelsey, MG Mead, RN Gruneberg, and JD Oriel

Sacroilitis and salpingitis
ESzanto and KHagenfeldt (Karolinska Hospital, Stockholm, Sweden). Scand J Rheumatol 1979; 8:129-35.