

Abstracts

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

Syphilis and other treponematoses (clinical and treatment; serology and biological false positive phenomenon; pathology and experimental)
Gonorrhoea (clinical; microbiology; treatment)
Chlamydial infections
Non-specific genital infection
Reiter's disease

Trichomoniasis
Candidosis
Genital herpes
Other sexually transmitted diseases
Public health and social aspects
Miscellaneous

Syphilis and other treponematoses (clinical and treatment)

Early infectious syphilis in Greenland: epidemiology, treatment, and control
CS PETERSEN, BB JØRGENSEN, AND NS PEDERSEN (Statens Seruminstitut, Copenhagen, Denmark). *Dan Med Bull* 1983; 30: 419-20.

Central nervous system involvement in early syphilis

G-B LÖWHAGEN, M ANDERSSON, C BLOMSTRAND, AND G ROUPE (Gothenburg University Hospital, Gothenburg, Sweden). *Acta Derm Venereol* 1983; 63: 409-17.

Rectal syphilis mimicking histiocytic lymphoma

MR FARIS, JJ PERRY, TG WESTERMEIER, AND J REDMOND III (Departments of Medicine and Pathology, Letterman Army Medical Center, Presidio of San Francisco, California, USA). *Am J Clin Pathol* 1983; 80: 719-20.

A 23 year old man was admitted to hospital with a rectal mass. He also complained of tenesmus, rectal bleeding, and a 4.5 kg weight loss over six months. Clinically he was fit, with no other abnormal findings apart from a generalised lymphadenopathy. A biopsy of the mass showed an infiltrate of plasma cells and lymphocytes. These were confluent nodules in the submucosa consisting of large pleomorphic cells and small lymphocytes. The material was interpreted as a histiocytic lymphoma of the rectum. Lymphangiography showed enlarged para-aortic and iliac lymph nodes.

This identified the lymphoma as stage IV and he was treated with cyclophosphamide, vincristine, adriamycin, and prednisolone. After this had been given the result of a VDRL test taken on admission was reported positive (at a titre of 1/64). Silver impregnation of the original biopsy material showed spirochaetes, and the patient was treated with penicillin. He then admitted having had anal intercourse with many partners.

This is the first time the "great imitator" has been mistaken for a lymphoma.
S I Egglestone

Toluidine red unheated serum test, a non treponemal test for syphilis

DE PETTIT, SA LARSEN, PS HARBEC, ET AL (Centers for Disease Control, Atlanta, Georgia, USA). *J Clin Microbiol* 1983; 18: 1141-5.

Syphilis (pathology and experimental)

Isolation and preliminary characterisation of circulating immune complexes from rabbits with experimental syphilis

RE BAUGHN, AND DM MUSER (Baylor College of Medicine, Houston, Texas, USA). *Infect Immun* 1983; 42: 579-84.

Circulating immune complexes in experimental syphilis: identification of treponemal antigens and specific antibodies to treponemal antigens in isolated complexes

RE BAUGHN, CB ADAMS, AND DM MUSER (Baylor College of Medicine, Houston, Texas, USA). *Infect Immun* 1983; 42: 585-93.

Cloning and expression of *Treponema pallidum* (Nichols) antigen genes in *Escherichia coli*

MV NORGARD AND JN MILLER (University of Texas Health Science Center, Dallas, Texas, USA). *Infect Immun* 1983; 42: 435-45.

Lack of endotoxin in *Borrelia hispanica* and *Treponema pallidum*

PH HARDY JR AND J LEVIN (Veterans Administration Medical Center, San Francisco, California). *Proc Soc Exp Biol Med* 1983; 174: 47-52.

Molecular basis of immunological cross-reactivity between *Treponema pallidum* and *Treponema pertenu*

SA BAKER-ZANDER AND SA LUKEHART (University of Washington School of Medicine, Seattle, Washington, USA). *Infect Immun* 1983; 42: 634-8.

Protein antigens of *Treponema pallidum* (Nichols strain) and *Treponema pertenu* (Gauthier strain) were identified by sodium dodecyl sulfate-polyacrylamide gel electrophoresis and Western blotting techniques. Treponemal proteins were solubilised in 1% sodium dodecyl sulfate, electrophoresed on 12.5% polyacrylamide gels, and either stained with Coomassie brilliant blue or electrophoretically transferred to nitrocellulose paper. These antigen blots were incubated with serum from rabbits infected with either *T pallidum* or *T pertenu* and ¹²⁵I-labelled staphylococcal protein A and exposed to X ray film for visualisation of antigenic molecules. Protein profiles of each organism separated by sodium dodecyl sulfate-polyacrylamide gel electrophoresis and stained with Coomassie brilliant blue showed no distinguishable differences.

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Antigenic profiles as determined by Western blots were similar, with two exceptions. A 39 500 dalton band was present on *T pertenuae* but absent from *T pallidum*, and a 19 000 dalton band was present on *T pallidum* but absent from *T pertenuae* (although two additional antigenic bands at 21 000 and 18 000 daltons were seen on *T pertenuae*). Because these differences were detected by using antisera raised against either *T pallidum* or *T pertenuae*, these molecules must contain some antigenic determinants in common despite their differences in molecular weight.

Authors' summary

Comparison of major protein antigens and protein profiles of *Treponema pallidum* and *Treponema pertenuae*

RW THORNBURG AND JB BASEMAN (University of Texas Health Science Center, San Antonio, Texas, USA). *Infect Immun* 1983; 42: 623-7.

The protein profiles of *Treponema pallidum* and *Treponema pertenuae*, the causative agents of syphilis and yaws, respectively, were compared by one dimensional and two dimensional gel electrophoresis. One dimensional gels showed essentially no differences in the protein patterns of these treponemes. On two dimensional gels most radiolabelled protein species were shared, although variations were noticed in several minor protein species. Antigenic comparison by radioimmunoprecipitation and Western blotting also showed similarities between these spirochetes. Iodination of *T pallidum* and *T pertenuae* catalysed by lactoperoxidase, however, suggested differences in their surface proteins.

Authors' summary

Humoral immune response in experimental syphilis to polypeptides of *Treponema pallidum*

PA HANFF, NH BISHOP, JN MILLER, AND MA LOVETT (University of California, Los Angeles, California, USA). *J Immunol* 1983; 131: 1973-7.

Gonorrhoea (clinical)

Disseminated gonococcal infection: a prospective analysis of 49 patients and a review of pathophysiology and immune mechanisms

JP O'BRIEN, DL GOLDENBERG, AND PA RICE (The Maxwell Finland Laboratory for Infectious Diseases, Boston City Hospital, Boston, Massachusetts, USA). *Medicine* 1983; 62: 395-406.

Forty nine patients identified as having disseminated gonococcal infection (DGI) were divided into two groups: Group I (29 patients) were patients believed not to have joint effusions but who had tenosynovitis, skin lesions, or both. Group II (19 patients) all had effusions and suppurative arthritis. Specimens from the genitalia, throat, rectum, and blood of all patients were cultured for *Neisseria gonorrhoeae*. All isolates were tested for minimum inhibitory concentrations of penicillin and for auxotypes and serogroups.

Thirteen of the Group I patients had positive blood cultures. Nine Group II patients had positive synovial fluid cultures. No Group II patient had positive blood cultures. Twenty seven Group I patients and eight Group II patients had skin lesions which were maculopapular, vesicular papular, or pustular. Aspirates from skin lesions of 10 patients were cultured for *N gonorrhoeae*, but none gave positive results.

The MIC of penicillin for Group I isolates taken as a whole was 0.0497 mg/l, and 0.0557 mg/l for Group II. Fifty eight per cent of all strains were Arg⁻ Hyx⁻ Ura⁻ or Pro⁻ Arg⁻ Hyx⁻ Ura⁻ auxotypes, 63% of these being in Group I and 46% in Group II. Ninety per cent of all strains were the transparent phenotype. All patients recovered fully from DGI. Treatment was with oral ampicillin alone or parenteral penicillin followed by oral ampicillin for at least seven days of antibiotic treatment. Two patients were treated with tetracycline and two with erythromycin. Serum from convalescent patients was tested for killing ability against the infecting strain in that patient. Seventy per cent of Group II patients' serum samples could kill the relevant strain, as opposed to 17% from Group I. There is a very full and interesting discussion of their own and other authors' findings, and 90 references.

G D Morrison

Gonococcal osteomyelitis complicating septic arthritis

EA TINDALL AND MG REGAN-SMITH (Department of Rheumatology, Providence Medical Center, Portland, Oregon, USA). *JAMA* 1983; 250: 2671-3.

A 29 year old man had a sudden onset of right shoulder pain, with fever and malaise. He had an erythrocyte sedimentation rate of 52 mm in the first hour. Despite treatment with phenylbutazone, migratory arthralgias of the wrists, ankles, hips, and shoulders developed. He was admitted to hospital 10 days after the onset of symptoms, treated with indomethacin for five days, and then discharged. A hip X ray at this time was reported normal, but on review later it showed some joint space narrowing. The pain in the hip did not subside, and movement was lost.

Seven weeks after the illness began the patient had an exploration of his hip joint. Purulent serosanguinous fluid was found together with necrotic articular cartilage. All specimens were cultured for bacteria and fungi but all cultures gave negative results. Two weeks later he was seen by rheumatologists. A relevant point in the history was an episode of culture negative non-specific urethritis 10 years earlier which had not been treated.

A second hip joint exploration was performed. The femoral head was excised: it was necrotic and purulent. Gram stained slides of the specimens showed no organisms, but bone fragment cultures grew *N gonorrhoeae*. He was treated with 21 MU penicillin G intravenously daily for one month, followed by oral penicillin 2 g a day for two more weeks. After a slow improvement, the patient returned to work after two months. Six months later a total hip replacement was performed. Cultures of bone removed at this time all gave negative results and the erythrocyte sedimentation rate was normal. Some residual movement restriction remained.

The authors review the four previously reported cases of gonococcal osteomyelitis, and consider that rapid resolution of arthritis with antibiotics before treating with anti-inflammatory agents would act as a differentiating test for gonococcal arthritis from other arthritides.

G D Morrison

Gonorrhoea (microbiology)

Gonococcal W serogroups in Scandinavia: a study with monoclonal and polyclonal antibodies

S BYGDEMAN, D DANIELSSON, AND E SANDSTRÖM (Huddinge University Hospital, S14186 Huddinge, Sweden). *Acta Path Microbiol Scand B* 1983; 91: 293-306.

Amylase inhibits *Neisseria gonorrhoeae* by degrading starch in the growth medium

MR GREGORY, WW GREGORY, DE BRUNS, AND JJ ZAKOWSKI (University of Virginia Medical Center, Charlottesville, Virginia, USA). *J Clin Microbiol* 1983; **18**: 1366-9.

Inhibition of *Neisseria gonorrhoeae* attachment to HeLa cells with monoclonal antibody directed against a protein II

RJ SUGASAWARA, JG CANNON, WJ BLACK, ET AL (University of California, Berkeley, California, USA). *Infect Immun* 1983; **42**: 980-5.

In vivo degradation of gonococcal outer membrane proteins within human leukocyte phagosomes

SJ EATON AND RF REST (Hahneman University, Philadelphia, Pennsylvania, USA). *Infect Immun* 1983; **42**: 1034-40.

Cultural proof of *Neisseria gonorrhoeae* in synovial fluid in disseminated gonococcal infection

HC KORTING, D ABECK, AND U NEUBERT (Dermatology Clinic and Polyclinic, Munich, FRG). *Dermatologica* 1983; **167**: 204-7.

ABO blood groups and susceptibility to gonococcal infection. 3. Role of iso-haemagglutinins in increased association of *Neisseria gonorrhoeae* to monocytes from blood group B individuals

DF KINANE, CC BLACKWELL, DM WEIR, ET AL (University of Edinburgh School of Medicine, Edinburgh, UK). *J Clin Lab Immunol* 1983; **12**: 83-6.

DNA hybridisation technique for the detection of *Neisseria gonorrhoeae* in men with urethritis

PA TOTTEN, KK HOLMES, HH HANDSFIELD, ET AL (Seattle Public Health Hospital, Seattle, Washington, USA). *J Infect Dis* 1983; **148**: 462-71.

Characterisation of ampicillin resistance plasmids of *Haemophilus ducreyi* and *Neisseria gonorrhoeae* with regard to location of origin of transfer and mobilisation by a conjugative plasmid of *Haemophilus ducreyi*

PL McNICOL, WL ALBRITTON, AND AR RONALD (University of Manitoba, Winnipeg, Manitoba, Canada). *J Bacteriol* 1983; **156**: 437-40.

In vitro antimicrobial susceptibility of penicillinase producing and intrinsically resistant *Neisseria gonorrhoeae* strains
MS COHEN, MH COONEY, E BLACKMAN, AND PF SPARLING (University of North Carolina, Chapel Hill, North Carolina, USA). *Antimicrob Agents Chemother* 1983; **24**: 597-9.

Ammonium bicarbonate as a replacement for carbon dioxide in transgrow bottles for primary isolation of *Neisseria gonorrhoeae*

LD POTTER, JS LEWIS, BB WENTWORTH, AND EH LARSEN (Michigan Department of Public Health, Lansing, Michigan, USA). *J Clin Microbiol* 1983; **18**: 1258-9.

Gono Gen coagglutination for confirmation of *Neisseria gonorrhoeae*

WD LAWTON AND GJ BATAGLIOLI (New York State Department of Health, Albany, New York, USA). *J Clin Microbiol* 1983; **18**: 1264-5.

Gonorrhoea (treatment)

1200 mg rifampicin (Rimactan) als Einzeldosisbehandlung der unkomplizierten Gonorrhoe der Frau

HR SCHWARZENBACH, T RUFLI, L GLAUS, AND N BERGAMIN (University of Basel, Basel, Switzerland). *Dermatologica* 1983; **167**: 262-6.

Non-specific genital infection

In vitro activity of norfloxacin against *Mycoplasma hominis* and *Ureaplasma urealyticum*

C SIMON AND U LINDNER (University of Kiel, D2300 Kiel, FGR). *European Journal of Clinical Microbiology* 1983; **2**: 479.

Chlamydial infections

Prevalence of antibodies to *Chlamydia trachomatis* in healthy population groups in Manitoba

N KORDOVÁ, JC WILT, L SEKLA, ET AL (University of Manitoba, Winnipeg, Manitoba, Canada). *Can Med Assoc J* 1983; **129**: 1111-6.

Failure of β -lactam antibiotics to eradicate *Chlamydia trachomatis* in the endometrium despite apparent clinical cure of acute salpingitis

RL SWEET, J SCHACHTER, AND MO ROBBIE (University of California, San Francisco, California, USA). *JAMA* 1983; **250**: 2641-3.

Attachment and internalisation of a *Chlamydia trachomatis* lymphogranuloma venereum strain by McCoy cells: kinetics of infectivity and effect of lectins and carbohydrates

G SÖDERLUND AND E KIHLESTRÖM (Linköping University, Linköping, Sweden). *Infect Immun* 1983; **42**: 930-5.

Epidemiology of sexually transmitted *Chlamydia trachomatis* infections

SE THOMPSON AND AE WASHINGTON (Centers for Disease Control, Atlanta, Georgia, USA). *Epidemiologic Reviews* 1983; **5**: 96-123.

Trifluoperazine inhibits the infectivity of *Chlamydia trachomatis* for McCoy cells
E KIHLESTRÖM AND G SÖDERLUND (Linköping University, Linköping, Sweden). *FEMS Microbiology Letters* 1983; **20**: 119-24.

Reiter's disease

Systemic lupus erythematosus in a patient with Reiter's syndrome

PS AISEN, BN CRONSTEIN, AND SB KRAMER (New York University Medical Center, New York, USA). *Arthritis Rheum* 1983; **26**: 1405-8.

Trichomoniasis

Polyamines in *Trichomonas vaginalis* (MBP 00368)

E WHITE, D HART, AND BE SANDERSON (May and Baker Ltd, Dagenham, Essex, UK). *Mol Biochem Parasitol* 1983; **9**: 309-18.

Metabolism and metronidazole uptake in *Trichomonas vaginalis* isolates with different metronidazole susceptibilities
M MÜLLER AND TE GORRELL (Rockefeller University, New York, USA). *Antimicrob Agents Chemother* 1983; **24**: 667-73.

Candidosis

Oral ketoconazole in the treatment of vaginal candidosis

MD TALBOT AND RC SPENCER (Royal Hallamshire Hospital, Sheffield, UK). *Current Therapeutic Research* 1983; 34:746-9.

In vitro and in vivo adherence of *Candida albicans* to mucosal surfaces

N LEHRER, E SEGAL, AND L BARR-NEA (Kupat Holim, Petah Tikva, Israel). *Ann Microbiol* 1983; B134:293-406.

Effects of subinhibitory concentrations of ketoconazole on in vitro adherence of *Candida albicans* to vaginal epithelial cells

JD SOBEL AND N OBBEDEANU (Medical College of Pennsylvania, Philadelphia, Pennsylvania, USA). *European Journal of Clinical Microbiology* 1983; 2:445-52.

Genital herpes

In vitro sensitivity to acyclovir in genital herpes simplex viruses from acyclovir-treated patients

C McLAREN, L COREY, C DEKKET, AND DW BARRY (Bristol-Myers, Syracuse, New York, USA). *J Infect Dis* 1983; 148:868-76.

Evaluation of prodrugs of 9-B-D-Arabinofuranosyladenine for therapeutic efficacy in the topical treatment of genital herpes virus infections in guinea-pigs

WM SHANNON, G ARNETT, DC BAKER *ET AL* (Kettering Meyer Laboratory, Birmingham, Alabama, USA). *Antimicrob Agents Chemother* 1983; 24:706-12.

Genital herpes: the disease, and its treatment including intravenous acyclovir

A MINDEL AND S SUTHERLAND (James Pringle House, Middlesex Hospital, London, UK). *J Antimicrob Chemother* 1983; 12 suppl B:51-60.

Current status and prospects for oral acyclovir treatment of first episode and recurrent genital herpes simplex virus
YJ BRYSON (University of California, Los Angeles, California, USA). *J Antimicrob Chemother* 1983; 12 suppl B:61-6.

Topical acyclovir in the treatment of genital herpes: a comparison with systemic therapy

AP FIDDIAN, GR KINGHORN, D GOLDMEIER, *ET AL* (Wellcome Research Laboratories, Beckenham, Kent, UK). *J Antimicrob Chemother* 1983; 12: suppl B:67-78.

Treatment of primary first-episode genital herpes simplex virus infections and acyclovir results of topical, intravenous and oral therapy

L COREY, J BENEDETTI, C CRITCHLOW, *ET AL* (University of Washington, Seattle, Washington, USA). *J Antimicrob Chemother* 1983; 12: suppl B:79-88.

Lack of efficacy of AMP against recrudescence genital herpes in guinea pigs

AB FRASER-SMITH, DF SMEE, AND TR MATTHEWS (Syntex Research Corporation, Palo Alto, California, USA). *Antimicrob Agents Chemother* 1983; 24:611-2.

Other sexually transmitted diseases

Antimicrobial therapy of chancroid: effectiveness of erythromycin

FA PLUMMER, LJ D'COSTA, H NSANZE, *ET AL* (University of Manitoba Health Science Center, Winnipeg, Manitoba, Canada). *J Infect Dis* 1983; 148:726-31.

Chancroid in Nigeria

RM JOSHI AND RV LAWANDE (Ahmadu Bello University Teaching Hospital, Zaria, Nigeria). *Trans R Soc Trop Med Hyg* 1983; 77:665-7.

Genital (virus) infections

LA de la MAZE AND EM PETERSON (Orange County Medical Center, Orange, California, USA). *Med Clin North Am* 1983; 67:1059-74.

Sexually transmitted virus infections in homosexual men

L MINTZ AND WL DREW (Mount Zion Hospital and Medical Center, San Francisco, California, USA). *Med Clin North Am* 1983; 67:1093-105.

Susceptibility of 40 *Haemophilus ducreyi* strains to 34 antimicrobial products

L SLOOTMANS, DA VANDENBERGHE, E VAN DYCK, AND P PIOT (University Instelling, Antwerp, Belgium). *Antimicrob Agents Chemother* 1983; 24:564-7.

Epidemiology of chancroid and *Haemophilus ducreyi* in Nairobi, Kenya

FA PLUMMER, LJ D'COSTA, H NSANZE, *ET AL* (University of Manitoba, Winnipeg, Manitoba, Canada). *Lancet* 1983; ii:1293-4.

Prevention of hepatitis B by vaccine in homosexual men

DP FRANCIS, SC HADLER, SE THOMPSON, *ET AL* (Centers for Disease Control, Atlanta, Georgia, USA). *Journal of Infection* 1983; 7 suppl 1:15-20.

Curved anaerobic bacteria in bacterial (non-specific) vaginosis and their response to antimicrobial therapy

CA SPIEGEL, DA ESCHENBACH, R AMSEL, AND KK HOLMES (Medical College of Wisconsin, Wood, Wisconsin, USA). *J Infect Dis* 1983; 148:817-22.

Complications of co-trimoxazole in treatment of AIDS associated *Pneumocystis carinii* pneumonia in homosexual men

HS JAFFE, DI ABRAMS, AJ AMMANN, *ET AL* (University of California, San Francisco, California, USA). *Lancet* 1983; ii:1109-10.

The acquired immune deficiency syndrome: a new disease of infectious origin

GRUPE DE TRAVAIL SUR LE S.I.D.A. *La Presse Médicale* 1983; 12:2453-6.

Genital warts and cervical neoplasia

S FRANCESCHI, *ET AL* (John Radcliffe Hospital, Oxford, UK). *Br J Cancer* 1983; 48:621-8.

A study of 415 women with genital warts, 135 with genital herpes, and 458 with trichomoniasis attending the sexually transmitted diseases clinic, Oxford, England. Appreciably more patients with genital warts (8.1%) than with trichomonas or gonor-

rhoea (1·9%) showed dyskaryotic changes or worse in the cervical smear at or a few months after first attendance, while for patients with herpes the figure was 1·6%. Of 219 women examined more than six months after first attendance (average three to four years) six (8·6%) of 70 women with genital warts showed superficial dyskaryosis or worse compared with four (3·4%) of 116 with gonorrhoea or trichomoniasis, and none of 33 with genital herpes.

These findings suggest that herpes is not directly relevant to dyskaryotic change but that one or more of the papilloma viruses may be.

R R Willcox

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Cervical wart virus infection, intraepithelial neoplasia, and carcinoma: an immunohistological study using a panel of monoclonal antibodies

HB MORRIS, KC GATTER, K PULFORD, *ET AL* (John Radcliffe Hospital, Oxford, UK). *Br J Obstet Gynaecol* 1983; **90**: 1069-81.

Public health and social aspects

Establishing efficient interview periods for gonorrhoea patients

ET STARCHER II, MA KRAMER, B CARLOTTA-ORDUNA, AND DF LUNBERG (Centers for Disease Control, Atlanta, Georgia, USA). *Am J Public Health* 1983; **73**: 1381-4.

Miscellaneous

Circumcision and sexually transmissible disease

SW PARKER, AJ STEWART, MN WREN, *ET AL* (Public Health Department, 69 Moore Street, Perth, Western Australia). *Med J Aust* 1983; **2**: 288-90.

The bard and the body. 3. Venereal disease — “the pox”

AC KAIL (Cronulla, New South Wales, Australia). *Med J Aust* 1983; **2**: 445-50.