

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

Trichomoniasis

Candidosis

Genital Herpes

Other Sexually-Transmitted Diseases

Public Health and Social Aspects

Miscellaneous

Syphilis and other treponematoses (Clinical and therapy)

Immunofluorescence of Tracheal Secretions in Neonatal Syphilis

MACIAS, E. G., ELLER, J. J., HUBER, T. W., ABRAHAM, G., DISERENS, H. W., and CRAWFORD, S. E. (1974) *Pediatrics*, **53**, 947

This paper from the University of Texas Health Centre reports a case of neonatal congenital syphilis in which the diagnosis was established by the demonstration of treponemes in the tracheo-bronchial aspirate by direct dark-field microscopy and immunofluorescent staining.

The infant was a white female born at term to a mother who had no prenatal care and whose V.D.R.L. taken at the time of delivery was positive 1:8. The infant showed no abnormality at birth, but 2 days later was noted to have hepatosplenomegaly with a negative blood V.D.R.L. She developed respiratory distress when 4 days old. Radiographs of the chest showed pulmonary infiltrates, and those of the long bones periosteal thickening with translucent metaphyses. Tracheal aspirate showed treponemes on dark-field examination, as did the cerebrospinal fluid. Treatment was started with penicillin and kanamycin together with supportive measures. The penicillin was continued for 4 weeks, the kanamycin being discontinued after 5 days. Response to treatment was rapid and complete recovery followed.

Although the exact cause of the pneumonitis is difficult to establish,

the authors feel that the pulmonary findings were possibly truly syphilitic and draw attention to the value of examining the tracheal aspirate by immunofluorescence for early identification of treponemes.

C. S. Ratnatunga

Secondary Syphilis and Hepatitis (1975) *Brit. med. J.*, **1, 112 (Leader)**

Syphilis (Pathology and experimental)

Protein Synthesis by *Treponema pallidum* extracted from infected Rabbit Tissue

BASEMAN, J. B., and HAYES, N. S. (1974) *Infect. and Immun.*, **10**, 1350

Purification and Characterization of Axial Filaments from *Treponema phagedenis* Biotype *reiterii* (the Reiter treponeme) BHARIER, M., and ALLIS, D. (1974) *J. Bact.*, **120, 1434**

Gonorrhoea (Clinical)

Gonococcaemia with Arthritis, Dermatitis, and Myocarditis

FRASER, H. S., LIBURD, A. L., FIGUEROA, J. P., NICHOLSON, G. A., JAMES, O. B. O. L., WHITBOURNE, F., and ALLEYNE, G. A. O. (1974) *Postgrad. med. J.*, **50**, 759

Gonorrhoea (Microbiology)

New System for Cultivation of *Neisseria gonorrhoeae*

MARTIN, J. E., ARMSTRONG, J. H., and SMITH, P. B. (1974) *Appl. Microbiol.*, **27**, 802

A comparison is described between Standard Thayer-Martin medium (T.M.) and a modified Thayer-Martin medium (M.T.M.). M.T.M. differed by containing 2 per cent. agar, additional dextrose (0.25 per cent.), and 5 µg./ml. trimethoprim. Cultures were incubated at 37°C. in candle jars. 61 stock cultures of *N. gonorrhoeae* grew equally well on either medium. 58 specimens from male urethras were positive on both media, but of 122 positive cultures from the female cervix on M.T.M. only 109 were positive on T.M. (one other specimen was positive on T.M. but not on M.T.M.). 23 cultures from clinical specimens were overgrown with *Proteus* spp. on T.M., but none on M.T.M.

A comparison was also made of (1) candle jars and (2) plastic bags containing the culture plates with citric acid-sodium bicarbonate tablets as a carbon dioxide source. The optimum thickness of the plastic bags was 0.003 in. Parallel cultures by the two systems showed no difference in growth or isolation. The tablet system may offer the convenience of being less cumbersome, requiring less incubator space, and being unbreakable, in comparison with the candle jar.

The authors comment finally on a report that 5 µg./ml. trimethoprim may inhibit from 12 to 22 per cent. of gonococci, although this was not their experience. Certainly, many authorities would now advocate a lower concentration of trimethoprim in M.T.M., still adequate for the inhibition of *Proteus* spp.

G. L. Ridgway

Use of Transport and Culture Medium combined with Immunofluorescence for the Diagnosis of Gonorrhoea

JEPHCOTT, A. E., MORTON, R. S., and TURNER, E. B. (1974) *Lancet*, **2**, 1311

119 female contacts of men with gonorrhoea were investigated by a combination of 'Transgrow' medium and delayed FA staining, and the results compared with those obtained with Gram staining and culture on a conventional medium, specimens being collected from the urethra, endocervix, and rectum. Gonorrhoea was diagnosed in ninety women (75.6 per cent.). All but two positive results occurred in initial tests. In half the patients, all three methods (Gram-stained smears, routine culture, and Transgrow-FA staining) gave positive results. Smears were negative in fourteen patients when both culture methods were positive, routine culture was negative in eight when both Gram-stained smear and Transgrow-FA were positive, and Transgrow-FA was negative in three patients in whom the other two methods were positive. Transgrow-FA was positive in 82 of the ninety patients positive by any method (94 per cent.), routine culture was positive in 65 (71 per cent.), and Gram-stained smears in 61 (67 per cent.).

It is concluded that the Transgrow-FA method is greatly superior to the other methods tested.

G. W. Csonka

Antigenically Distinct Populations of *Neisseria gonorrhoeae*: Isolation and Characterization of the Responsible Determinants

APICELLA, M. A. (1974) *J. infect. Dis.*, **130**, 619

Two antigenically distinct populations of *Neisseria gonorrhoeae*, tentatively designated Gc₁ and Gc₂, have been identified in ten randomly selected gonococcal strains. The antigenic determinants responsible for this differentiation have been isolated by DEAE-cellulose chromatography from the alkali-digested phenol-water extract of these strains. Immunodiffusion, immunoelectrophoresis, and electrofocusing studies in acrylamide gel indicate that isolated antigen preparations contain essentially one component. Immunological analysis

reveals that these antigens share a core determinant in addition to their respective population-specific determinants. Immunochemical and physicochemical studies demonstrate that the Gc₁ and Gc₂ antigens are acidic polysaccharides with very similar charge and size characteristics.

Author's summary

Transfer of Antibiotic Resistance in Mixed Cultures of *Neisseria gonorrhoeae*

SARUBBI, F. A., JR., and SPARLING, P. F. (1974) *J. infect. Dis.*, **130**, 660

Resistance to spectinomycin, streptomycin, rifampicin, and erythromycin was transferrable during mixed-broth cultivation of sensitive and resistant strains of *Neisseria gonorrhoeae*. Resistance to each drug was ordinarily transferred independently of resistance to the others. Resistance was not transferred in the presence of DNase, and transfer was most probably due to transformation of competent clonal Type 1 or Type 2 recipients by DNA liberated from the donor strain into the culture broth. The results are of potential relevance to clinical problems of development and spread of antibiotic-resistant gonococci.

Author's summary

Evaluation of the Bag-CO₂ generating Tablet Method for Isolation of *Neisseria gonorrhoeae*

HOLSTON, J. L., HOSTY, T. S., and MARTIN, J. E. (1974) *Amer. J. clin. Path.*, **62**, 558

Effect of Progesterone on *Neisseria gonorrhoeae*

MORSE, S. A., and FITZGERALD, T. J. (1974) *Infect. and Immun.*, **10**, 1370

Genetic Mapping of Linked Antibiotic Resistance Loci in *Neisseria gonorrhoeae*

SARUBBI, F. A., JR., BLACKMAN, E., and SPARLING, P. F. (1974) *J. Bact.*, **120**, 1284

Cross-Reactivity of *Neisseria gonorrhoeae* and *Neisseria meningitidis* and the Nature of Antigens Involved in the Bacterial Reaction

TRAMONT, E. C., SADOFF, J. C., and ARTENSTEIN, M. S. (1974) *J. infect. Dis.*, **130**, 240

Ribosomal Resistance to Streptomycin and Spectinomycin in *Neisseria gonorrhoeae*

MANESS, M. J., FOSTER, G. C., and SPARLING, F. P. (1974) *J. Bact.*, **120**, 1293

The Case for Gonococcal Serology

NORINS, L. C. (1974) *J. infect. Dis.*, **130**, 677

Gonorrhoea (Therapy)

Treatment of Gonorrhoea. Comparison of Penicillin G Procaine, Doxycycline, Spectinomycin, and Ampicillin

JUDSON, F. N., ALLAMAN, J., and DANS, P. E. (1974) *J. Amer. med. Ass.*, **230**, 705

Comparison of Spectinomycin Hydrochloride and Aqueous Procaine Penicillin G in the Treatment of Uncomplicated Gonorrhoea

DUANCIC, A., FIUMARA, N. J., ALPERT, S., LEE, Y.-H., TARR, P. I., ROSNER, B., and MCCORMACK, W. M. (1974) *Antimicrob. Agents Chemother.*, **6**, 512

Spectinomycin and Penicillin Probenecid in Acute Uncomplicated Gonococcal Urethritis. A Comparison

KECHIJIAN, P., and GALLAS, R. N. (1974) *Milit. Med.*, **139**, 955

Comparison of Amoxicillin and Ampicillin in Single-dose Oral Treatment of Males with Gonococcal Urethritis

MITCHELL, R. W., and ROBSON, H. G. (1974) *Canad. med. Ass. J.*, **111**, 1198

Acute Gonococcal Urethritis in Males treated with a Single Oral Dose of Pivampicillin Hydrochloride

HUNTON, R. B., HARPER, R. G., BREMNER, D. A., and HOOKHAM, A. B. (1974) *N.Z. med. J.*, **80**, 205

Treatment of Gonorrhoea with Cefazolin plus Probenecid

DUNCAN, W. C. (1974)
J. infect. Dis., **130**, 398

Non-specific genital infection

Infection with *Mycoplasma hominis* and T-strains in the Female Genital Tract

LAMEY, J. R., FOY, H. M., and KENNY, G. E. (1974)
Obstet. and Gynec., **44**, 703

Cultures for *Mycoplasmas* were obtained from the cervix, endometrium, and Fallopian tubes of women undergoing caesarian section. A total of 56 per cent. of 79 women were found to be colonized with *Mycoplasma hominis* and/or T-strains, and in 42 per cent. the organisms were recovered from the endometrium and/or the Fallopian tubes. Recovery of *Mycoplasmas* from the internal genitalia was associated with rupture of membranes and the increasing duration of such rupture prior to surgery. Patients with *Mycoplasmas* in the internal genitalia suffered post-partum fever more often than those without such colonization. *Mycoplasmas* may be aetiologically related to otherwise unexplained post-partum fever. However, the pathogenicity of *Mycoplasmas* in the internal female genitalia appeared to be low, since the post-partum fever observed in such patients was usually low-grade, of short duration, and seldom associated with significant morbidity.

Author's summary

Isolation of Genital *Mycoplasmas* from Blood obtained shortly after Vaginal Delivery

MCCORMACK, W. M., ROSNER, B., LEE, Y.-H., RANKIN, J. S., and LIN, J.-S. *Lancet*, **1**, 596

Blood obtained from 327 women within a few minutes of vaginal delivery was cultured for genital *Mycoplasmas* (*M. hominis* and T-mycoplasmas). 26 (8 per cent.) of the women had genital *Mycoplasmas* isolated from their blood. Ten women had blood cultures which contained *M. hominis*. Fifteen women had blood cultures which contained T-mycoplasmas. Both *M. hominis*

and T-mycoplasmas were obtained from the blood of one woman. Only one of 273 blood cultures obtained one or more days after delivery contained *Mycoplasmas*. The isolation of *M. hominis*, but not of T-mycoplasmas, from the blood was associated with vaginal colonization and a serological response to the homologous isolate. Two of ten women whose blood contained *M. hominis* gave birth to stillborn infants. In contrast, there were only four (1.3 per cent.) stillbirths among the infants born to the 301 women whose blood did not contain *Mycoplasmas*. This difference is statistically significant.

Author's summary

Doxycycline Treatment and Human Infertility

HARRISON, R. F., DE LOUVOIS, J., BLADES, M., and HURLEY, R. (1975)
Lancet, **1**, 605

The role of *Mycoplasmas* in infertility was studied in 120 couples. During the 12 months of the study, 27 couples (22.5 per cent.) conceived. T-mycoplasmas were isolated from 63 per cent. of these couples, and *Mycoplasma hominis* from 18 per cent., compared with 56 per cent. and 13 per cent. respectively, in those who did not conceive. 88, with primary infertility of unascertained cause, took part in a controlled trial with doxycycline. The couples in the trial were allocated randomly to three groups: thirty received doxycycline, 28 received a placebo, and thirty were untreated. Although a 28-day course of doxycycline eradicated *M. hominis* and T-strain *Mycoplasmas* from 27 (96 per cent.) of the 28 couples harbouring them, the rate of conception was no higher in those treated with the drug than in control groups. It is concluded that *Mycoplasmas* are not associated with primary infertility and that, although doxycycline eradicates them, this drug is of no benefit in the treatment of primary infertility of unascertained cause.

Author's summary

Mycoplasma Species in a Dysplasia Clinic Population

LYONS, J. F., SHEPARD, M. C., DAANE, T. A., WURZEL, J. F., and LUNCEFORD, C. D. (1974)
Amer. J. Obstet. Gynec., **120**, 554

Genital herpes

On the Occurrence of Genital Herpes Simplex Virus Infection

JEANSSON, S., and MOLIN, L. (1974)
Acta dermat.-venereol. (Stockh.), **54**, 479

The Latent Herpes Simplex Virus

DOCHERTY, J. J., and CHOPAN, M. (1974)

Bact. Rev., **38**, 337

Other sexually-transmitted diseases

Hypercalcemia associated with Giant Condyloma Acuminatum

BENNETT, R., DECHERD, J., and HEATON, C. L. (1974)

Acta dermat.-venereol. (Stockh.), **54**, 407

A 48-year-old Negro male attended the Philadelphia General Hospital in 1972 with a large bleeding tumour protruding from the anus. This was the third recurrence of this tumour, which had previously been excised in 1966, 1967, and 1969. On this occasion laboratory investigation showed serum calcium 12.4 mg. per cent., phosphorus 2.4 mg. per cent., and alkaline phosphatase 121 i.u./litre. The urinary calcium excretion was 288 mg./24 hrs. There was a secondary anaemia, and STS were positive (RPR reactive 1:8, FTA-ABS positive), but the patient was known to have had latent syphilis in the past.

The tumour was excised; at the time of operation no extension into the rectum was seen on sigmoidoscopy. Histology showed a typical condyloma acuminatum with a highly inflammatory fibrous stroma. Post-operatively the serum calcium returned to normal, and the urinary calcium excretion fell to 72 mg./24 hrs.

When the medical records were reviewed, it was noted that in 1969 the patient had had a preoperative serum calcium of 13.5 mg. per cent.; after excision of the condylomata at that time the serum calcium had returned to normal.

The authors discuss the differential diagnosis of the hypercalcaemia in this patient and conclude that he demonstrates a paraendocrine syndrome (pseudohyperparathyroidism) caused by the production of a parathyroid hormone-like substance by a recurrent condyloma acuminatum. Hypercalcaemia is known to be

associated with several different kinds of neoplasm without skeletal involvement, but is rare in cutaneous neoplasms and has not previously been described in condyloma acuminatum.
J. D. Oriel

Ultrastructure of Molluscum Contagiosum Virus as revealed by Freeze-Etching Technique
HASEGAWA, T., TAKEUCHI, M., and IMAMURA, S. (1974)
J. invest. Derm., **63**, 331

Public health and social aspects
Venereal Disease in Adolescents
RIGG, C. A. (1975)
Practitioner, **214**, 199

Miscellaneous
***Clostridium difficile* in the Urogenital Tract of Males and Females** HAFIZ, S., MCENTEGART, M. G., MORTON, R. S., and WAITKINS, S. A. (1975)
Lancet, **1**, 420

A study of the occurrence of *Clostridium difficile* in the urogenital tract of males and females revealed higher isolation rates in patients attending the special (venereal disease) clinic than in patients attending family-planning and urological clinics. The presence of *Cl. difficile* in patients with venereal diseases is being investigated to see if the organism is simply an opportunist infecting a urethra disturbed by some antecedent disease, or if it is perhaps a primary cause of disease.

Author's summary

Simultaneous Occurrence of *Neisseria gonorrhoeae*, *Candida albicans*, and *Trichomonas vaginalis* NIELSEN, R., SØNDERGAARD, J., and ULLMAN, S. (1974) *Acta derm.-venereol. (Stockh.)*, **54**, 413

***Haemophilus (Corynebacterium) vaginalis* Septicemia**
MONIF, G. R. G., and BAER, H. (1974)
Amer. J. Obstet. Gynec., **120**, 1041

Sexual Transmission of Viral Hepatitis? FASS, R. J. (1974)
J. Amer. med. Ass., **230**, 861

Behçet's Syndrome: Clinical, Immunological and Therapeutic Evaluation of Seventeen Patients
COOPER, D. A., and PENNY, R. (1974)
Aust. N.Z. J. Med., **4**, 585

Genitourinary Medicine (1975)
Brit. med. J., **1**, 51 (Leader)