Abstracts

This section of the JOURNAL is published in collaboration with two abstracting Journals, ABSTRACTS OF WORLD MEDICINE and OPHTHALMIC LITERATURE, published by the British Medical Association. The abstracts are divided into the following sections:

Syphilis (Clinical, Therapy, Serology, Biological False Positive Phenomenon, Pathology, Experimental).
Gonorrhoea.
Non-Gonococcal Urethritis and Allied Conditions.
Reiter’s Disease and Allied Conditions.
Antibiotics and Chemotherapy.
Public Health and Social Aspects.
Miscellaneous.

After each sub-section of abstracts follows a list of articles that have been noted but not abstracted.

Syphilis Clinical
Lesions of Congenital Syphilis
CREMIN, B. J., and FISHER, R. M. (1970) Brit. J. Radiol., 43, 333 11 figs, 22 refs

The clinical and radiological presentation of 108 cases of prenatal or congenital syphilis from a 10-year survey are reviewed.

Part I deals with 102 patients with early syphilis aged from 1 day to 6 months. The bony presentations are reviewed and the relative incidence of the varying appearances stated. Histology was studied in four cases. This did not show any specific inflammatory change. The changes are thought to be due to growth disturbance, incomplete bone formation, and collapse at the growing ends of the bones. In view of the dystrophic rather than inflammatory origin, it is suggested that the nomenclature be reviewed. A prospective pathological study is in progress and two further autopsies have shown no inflammatory skeletal lesion.

Part II deals with the late inflammatory changes which occurred. These were six cases which consisted of sabre tibiae, arthropathies, and gumma.

No explanation for the distribution of the lesions can be given.

Authors’ summary

X-Ray Diagnosis of Syphilis in the Newborn
COBLENTZ, D. R., and MIKITY, V. G. (1970) J. Amer. med. Ass., 212, 1061 7 figs, 8 refs

Secondary Syphilis misdiagnosed as Lymphoma
GOFFINET, D. R., HOYT, C., and ELTRINGHAM, J. R. (1970) Calif. Med., 112, 22 2 refs

Graphic Guide for Clinical Management of Latent Syphilis
PEREYRA, A. J., and VOLLER, R. L. (1970) Calif. Med., 112, 13 12 refs

Diagnosis and Treatment of Syphilitic Aneurysms of the Thoracic Aorta (Zur Erkennung und Behandlung Juscher Aneurysmen der thorakalen Aorta)
HEBERER, G., and SCHILDBERG, F. W. (1970) Dtisch. med. Wschr., 95, 1707 69 refs

Syphilis Therapy
Failure of Penicillin in a Newborn with Congenital Syphilis
HARDY, J. B., HARDY, P. H., OPPENHEIMER, E. H., RYAN, S. J., and SHEFF, R. N. (1970) J. Amer. med. Ass., 212, 1345 6 figs, 10 refs

A woman was found to have secondary syphilis, and treatment with tetracycline prescribed but not completed; 11 months later, when about 7 months pregnant, she was found to have gonorrhoea and was treated with 2-4 mega units benzathine penicillin G. She was admitted to labour at Johns Hopkins Hospital 10 days later and was delivered of a girl weighing 4 lb. The child had a small head and enlarged liver and spleen and the abdomen was distended; a petechial rash developed 12 hrs after birth and there was increasing respiratory distress. Meconium peritonitis or generalized sepsis was suspected and treatment was started with potassium penicillin G (50,000 units/kg/day to a total of over 800,000 units/kg) and kanamycin (15 mg/kg/day). Reports of VDRL, CWR, TPI, and FTA-ABS tests on the cord blood were returned as strongly positive at titres greater than the maternal levels. The clavicles and long bones showed periostitis and irregular metaphyses on X-ray. When the diagnosis of congenital syphilis was apparent, treatment with kanamycin was stopped. Because of thrombocytopenia, corticosteroids were given from the 2nd to the 10th day. On the 2nd day after birth, the spinal fluid showed 138 mononucleated cells per cu. mm. and a protein level of 264 mg. per cent. On the 10th day the cell count had fallen to 25 per cu. mm. and a single non-motile treponeme was seen by dark ground microscopy.

The baby failed to thrive and bacterial sepsis was suspected and confirmed by the isolation of Klebsiella from the blood, urine and spinal fluid on the 17th day. Penicillin was discontinued and kanamycin, colistin sulphate, and prednisone was given, but death occurred on the 22nd day after birth.

At post-mortem, gross changes of congenital syphilis were seen only in the long bones. The liver showed histological evidence of periportal fibrosis and interstitial scarring. The lungs showed the residua of pne-
monia alba in the healing stage. Lesions in the brain were confined to the meninges and were typical of congenital syphilitic meningitis.

A non-motile treponeme was seen by darkground in aqueous removed immediately after death. Rabbits were inoculated intratesticularly with aqueous, ground ocular tissue and liver. After 75 days' incubation, the animals inoculated with aqueous and ocular tissue developed testicular lesions and a strain of Treponema pallidum, highly virulent to the rabbit, was isolated. Tests in vitro showed that this was not resistant to penicillin.

The demonstration of persisting virulent T. pallidum in this infant, who had been treated with penicillin, both in utero and after birth, leads the authors to question whether children born of syphilitic mothers should not be kept under observation for a number of years, regardless of immediate clinical or serological evidence of disease. If this were done, early detection of developing eye lesions might be possible; treatment given at an early stage might be more effective than when crippling eye lesions are already present.

A. E. Wilkinson

Syphilis Serology

New Antibody in Early Syphilis

WRIGHT, D. J. M., DONIACH, D., LESOFF, M. H., TURK, J. L., GRIMBLE, A. S., and CATTERALL, R. D. (1970) Lancet, 1, 740

Lipoidal antigen tests, such as the Wassermann reaction and VDRL test, detect antibody to tissue components present in all cells in the inner membranes of mitochondria. Antibodies against another lipoprotein component of the mitochondrial inner membrane have also been detected by immunofluorescence techniques in serum from cases of primary biliary cirrhosis and related autoimmune disorders and in other conditions associated with biological false positive reactions. These M antibodies cannot be removed from sera by absorption with VDRL antigen.

A further type of antibody (cardiolipin F) has now been found by indirect fluorescence tests of syphilitic sera on tissue sections, adult or foetal kidney being suitable substrates. F antibody produces diffuse staining of the cytoplasm of the distal renal tubules and weaker staining of the proximal tubules; it is less granular than fluorescence due to M antibody and can be removed from sera by absorption with VDRL antigen, cardiolipin being active in this respect but not lecithin or cholesterol.

Tests on 327 sera from patients with untreated or treated syphilis at various stages, 23 patients presumed to have yaws, and fifty control subjects showed that the F antibody was largely confined to the early stages of syphilis. It was detected in seven of 34 cases of primary, twenty of 21 cases of secondary, and twelve of 26 cases of early latent syphilis. Apart from these it was only found in two patients with gummatia. The titre was low, not exceeding 1 in 40, and showed no correlation with the VDRL titre. The antibodies were of the IgG and IgM classes, the latter being found more often in primary syphilis. They are stable within the range 20 to 56°C. After treatment they disappear rapidly usually within 3 months.

Cardiolipin F antibody is not completely specific for syphilis and has been found at a high titre in two biological false positive reactors, one with reticulosis and the other with a coagulation disorder causing arterial thrombosis. It is suggested that tests for cardiolipin F antibody may be of use in assessing the duration of latent syphilis and, if an anti-IgM conjugate is used, in the diagnosis of early sero-negative primary syphilis.

A. E. Wilkinson

Positive Fluorescent Treponemal Antibody Reactions in Diabetes

HUGHES, M. K., FUSILLO, M. H., and ROBERSON, B. S. (1970) Appl. Microbiol., 19, 425

222 sera from 129 diabetics were examined by the FTA-200 and VDRL slide tests at the Veterans Administration Hospital, Washington, D.C. The FTA-200 test was positive in 31 (24 per cent.) of the diabetics but in only five (3.5 per cent.) of a control series of 142 apparently normal individuals whose sera gave negative VDRL tests. [It is not stated whether the control group was matched for age with the diabetics.] The reactive sera were checked by the FTA-ABS test; nine of the 31 diabetic and two of the five normal sera gave positive results with this test.

Sera were separated by electrophoresis and then allowed to react with the sorbent used in the FTA-ABS test diffusing from a trough parallel to the line of separation. Precipitin lines developed in the gamma globulin region with twelve out of 22 diabetic sera which gave positive FTA-200 but negative FTA-ABS tests. In contrast, no lines were seen with nine diabetic sera on which both these tests were positive. Similar lines were seen with four of 52 diabetic sera which gave negative FTA-200 tests, with fourteen of 53 normal FTA-negative sera, and with twelve of 36 normal sera on which the FTA-200 test was not performed.

Three batches of sorbent were used in this work; these varied in their total protein and lipid content and one failed to give any precipitin lines with sera which reacted with the other two. Sera produced precipitin lines after treatment with 0.2 M mercaptoethanol, suggesting that an IgG globulin was involved.

It is suggested that unrecognized substances in the sera of diabetics may stabilize a reaction between the treponeme and a cross-reacting antibody which is present in varying amounts both in diabetic and normal sera.

[The 7 per cent. incidence of positive FTA-ABS tests (suggesting treponemal infection) in diabetics seems unusually high. Confirmation of the specificity of the results of the FTA tests with the TPI test would have been desirable.]

A. E. Wilkinson

[Reported from Abstracts of Hygiene, by permission of the Editor.]

Usefulness of the Haemagglutination Test using Treponema pallidum Antigens (TPHA) for the Sero-diagnosis of Syphilis

TOMIZAWA, T., KASAMATSU, S., and YAMAYA, S. (1969) Jap. J. Med. Sci. Biol., 22, 341

The antigen used in this test is a 2.5 per cent. suspension of formalized tanned sheep cells coated with an
ultrasonicate of *Treponema pallidum* in buffered saline with 0.25 per cent. gum arabic, 1 per cent. rabbit serum, and 0.01 per cent. Tween 80 as stabilizing agents. Before testing, inactivated sera are absorbed with nineteen parts of a 1 per cent. suspension of formalized tanned cells containing 0.5 per cent. Reiter protein antigen and 0.5 mg/ml. dried rabbit testis powder to remove cross-reacting antibodies. Without these last two absorbing agents the test gave a considerable proportion of false positive reactions with non-syphilitic sera. The technique of preparing the reagents and performing the test is given in detail.

In tests on 97 sera from patients with various stages of syphilis, mainly treated, the TPHA test was reactive in 89, the FTA-ABS test in 83, and the VDRL test in 81. With 78 sera from patients with false positive tests for reagin or diseases other than syphilis, the tests were reactive in 6, 13, and 29 sera respectively. VDRL and TPHA tests were performed on 7,324 specimens from blood donors, representing a presumably healthy population. 99 sera were positive by both tests and all these patients apparently had a previous history of syphilis. 25 sera were reactive in the VDRL test only; FTA-ABS tests on these gave only one positive result, but twelve of the fifteen sera which gave positive TPHA and negative VDRL tests were found to be positive in the FTA-ABS test.

In serial tests on rabbits infected with *T. pallidum*, reactivity in the TPHA test appeared rather later than in the VDRL, RPCFT, and FTA-200 tests, but it persisted at a high titre for more than 36 months; by this time the VDRL and RPCFT tests were negative or only reactive at a low titre.

The TPHA test is thought to be a simple and useful diagnostic method. The authors claim it to be comparable to the TPI and FTA-ABS tests in sensitivity and specificity when the improved absorption method is used.

*A. E. Wilkinson*

[Reported from *Abstracts on Hygiene*, by permission of the Editor.]

**Evaluation of a Quantitative Automated Microhemagglutination Assay for**

**Antibodies to Treponema pallidum**  LOGAN, L. C., and COX, P. M. (1970) *Amer. J. clin. Path.*, 53, 163 7 refs

A quantitated automated microhaemagglutination (AMH) test for assay of antibodies to *Treponema pallidum* recently developed by the authors of this paper (Cox et al., *Appl. Microbiol.*, 1969, 18, 485) has been compared with the FTA-ABS test on 670 sera from clinically defined donors at the Communicable Disease Center, Atlanta, Georgia. The AMH test is based on the agglutination by syphilitic antibody of erythrocytes sensitized with material from *T. pallidum*. Reagents for the test were obtained from a commercial source.

Of the 670 sera, 304 were from patients presumed to be free from syphilis. These included 96 sera from patients in hospital for a variety of conditions and 60 which had given false positive reagin tests. The FTA-ABS test was reactive in 0.3 per cent. and the AMH test in 0.9 per cent. of this group. A syphilis group of 366 consisted of 140 untreated and 226 treated cases representing all stages of the disease. The two tests showed a similar reactivity in the group as a whole (FTA-ABS 95.9 per cent.; AMH 96.4 per cent.). The FTA-ABS test was rather more sensitive in untreated primary syphilis; it was reactive in all of the 48 patients in this group whereas the AMH test was reactive in only 45 cases. Titres with the latter test were highest in untreated secondary syphilis. Sera from eight patients with primary and thirteen with secondary syphilis were examined both before and a year after treatment; ten showed no significant decrease in AMH titre and eleven a 4-fold or greater fall.

The AMH test is said to be easy to perform and interpret and to be reproducible; up to 200 sera can be tested and read in a working day. The results correlate well with those of the FTA-ABS test and the authors consider that the AMH test merits further evaluation under routine laboratory conditions.

*A. E. Wilkinson*

**Immunoglobulins in Congenital Syphilis**  (Le immunoglobuline nella lues connatale (con particolare riguardo alle IgM))  ARMENIO, L., and CECIL, A. (1970) *Pediatrics*, 78, 246 1 fig., 21 refs

**Immunological Patterns in Syphilis including the Question of Antibodies, with Reference to Newer Experimental Studies**  (Über das Wesen der Immunität bei Syphilis, mit Einschluss der Antikörperfrage)  GROSSMANN, H. (1970) *Hautarzt*, 21, 245 55 refs

**Value and Limitations of the Reiter Treponeme Agglutination Test of Roemer and Schlipköter for the Serological Diagnosis of Syphilis**  (Valore e limiti del test di agglutinazione delle spirochete di ceppo Reiter, secondo Roemer e Schlipköter, per l'accertamento sierologico della lue)  LINCOLN, O., CIOFFI, P., and GIANNINI, M. T. (1969) *Ann. Scelavo*, 11, 540 1 fig., 46 refs

**Nelson-Mayer TPI Test and the Question of Cure of Syphilis in Practice**  (Der TPI-Test Nelson-Mayer und die Frage der Syphilisausheilung in der Praxis)  HÜBSCHMANN, K. (1970) *Wien. klin. Wschr.*, 82, 371 6 refs

**Syphilis Biological false positive phenomenon**

**Mitochondrial and Other Tissue Autoantibodies in Patients with Biological False Positive Reactions for Syphilis**  DONIACH, D., DELHANTY, J., LINDQVIST, H. J., and CATTERALL, R. D. (1970) *Clin. exp. Immunol.*, 6, 871

Autoantibodies reacting in immuno-fluorescence tests with a lipoprotein compound of the mitochondrial inner membrane are frequently found in primary biliary cirrhosis and allied conditions. The authors, working at the Middlesex Hospital, have found this M fluorescence in tests on 21 of 41 sera from patients giving chronic BFP reactions but in none of 75 sera from patients with proved syphilis. The BFP reactors also showed an increased incidence of other tissue autoantibodies. Antinuclear antibody was found in nineteen of the 41 sera, eleven having titres of 1 in 20 or above.
Ten cases gave fluorescence with smooth muscle but the incidence of rheumatoid factor and thyroid specific antibody was only slightly above that expected in control groups. The serum IgM level was raised in sixteen patients; thirteen of these sera showed mitochondrial and/or nuclear fluorescence.

In the BFP group the titre of M fluorescence varied from 1 in 5 to 1 in 50. The antibodies were mainly IgM in ten, IgG and IgM in eight, and mainly IgG in three. There was no correlation between M fluorescence and the titres of the VDRL test or a complement-fixation test with a rat kidney homogenate antigen. The antibody responsible for M fluorescence is distinct from Wassermann antibody and is not removed from sera by absorption with VDRL antigen. M fluorescence appears to be correlated with the presence of systemic disease in BFP reactors; this was present in fourteen of the 21 M-positive cases, but in only five of the twenty patients in whom the antibody was not detected. It is suggested that tests for M fluorescence may be of value in selecting those patients with BFP reactions who need prolonged medical surveillance.  

A. E. Wilkinson

Fluorescent Treponemal Antibody Absorption Test  
Reactions in Lupus Erythematous. Atypical Beading Pattern and Probable False Positive Reactions  
KRAUS, S. J., HASERICK, J. R., and LANTZ, M. A. (1970) New. Engl. J. Med., 282, 1287

In the FTA-ABS test, syphilitic sera produce a uniform fluorescence of treponemes. The authors (J. Amer. med. Ass., 1970, 211, 2140) found that some sera from patients with lupus erythematous (LE) produced a beaded appearance in which the treponemes showed multiple globules of fluorescence along their length, the intervening areas showing little or no fluorescence.

In further studies at the Venereal Diseases Research Laboratory, Communicable Disease Center, Atlanta, Ga, sera were examined from 150 patients with LE and from a control group of premarital blood samples. These latter were matched for sex, race, and mean age with the LE group. VDRL, FTA-ABS, and TPI tests were carried out, all being negative in the control series. In the LE group, the VDRL test was reactive in 24, the FTA-ABS test showed some reactivity in 23, and the TPI test was positive on one serum on which the other two tests were also positive.

Beaded fluorescence was seen in eleven of the 23 sera which reacted in the FTA-ABS test; none of these eleven were reactive in the VDRL test. The other twelve sera gave homogeneous fluorescence, as seen with syphilitic sera, the results being read as reactive in four and borderline in eight. The VDRL was reactive or weakly reactive in four of these twelve sera. None of the 23 patients had any clinical or epidemiological evidence of syphilis.

Beaded fluorescence has not been seen with syphilitic sera. Its specificity for LE is not known, nor is its cause. Those performing the FTA-ABS test should be aware of its existence and it is recommended that a category of 'atypical fluorescence' should be added to the normal scheme of reporting results.  

A. E. Wilkinson

[Reprinted from Abstracts on Hygiene, by permission of the Editor.]

Temporal Bone Treponemes  
MACK, L. W., SMITH, J. L.; WALTER, E. K., MONTENEGRO, E. N. R., and NICOL, W. G. (1969) Arch. Otolaryg., 90, 37 6 figs, 15 refs

Gonorrhoea  
Rolitetracycline by Injection and Tetracycline Phosphate  
Complex by Mouth given in a Single Session in the Treatment of Gonorrhoea in Males  
[In English] WILCOX, R. R. (1970) Acta derm.-venereol. (Stockh.), 50, 154 7 refs

Since the gonococcus is becoming increasingly resistant to penicillin there is a continuing need to find alternative, effective methods of treating gonorrhoea at a single session. The author, from St. Mary's Hospital, London, and King Edward VII Hospital, Windsor, reports the use of tetracycline phosphate complex (Tetrex) given in a single dose of 500 mg. by mouth, together with pyrrolidino-methyl tetracycline nitrate (rolitetracycline, Tetrex PMT) in a single dose of 350 mg. by IM injection at the same session to 48 men (aged 19-41) whose disease had been present 1-14 days.

Patients were instructed to attend 2 to 5 days, 2, 4, 8, and 12 weeks, and 3 months later for follow-up, but not all did so. Of 45 attenders, in seven (15.6 per cent.) the treatment was regarded as having failed. In six (11 per cent.) non-gonococcal urethritis and in three others Reiter's syndrome supervised and required additional treatment; this incidence of Reiter's syndrome (6 per cent. in this
admittedly small series) contrasts with the expected incidence following treated gonorrhoea of 1 per cent.

These results were less good than those obtained by other workers using adequate single doses of penicillin given by injection, but roughly similar to those following adequate single oral doses of other tetracyclines or of ampicillin. **Eric Dunlop**

**Doxycline Treatment of Gonorrhoea in Cases with Decreased Penicillin Susceptibility of Gonococci**

[In English] **LASSUS, A.**(1970) 
*Chemotherapy*, 15, 125 7 refs

This paper from the University Central Hospital, Helsinki, reports a trial of doxycline (6-deoxy-5-hydroxytetracycline) in the treatment of 34 males and seven females with gonorrhoea in which the strain of organism was resistant to penicillin (minimum inhibitory concentration (MIC) 0.2-1.0 U/ml.). In all cases the diagnosis was based on positive microscopy and a positive culture. In 21 cases previous treatment with at least 1/2 mega units penicillin had failed; of the remainder, nine had a previous history of allergy to penicillin and eleven had not received penicillin for other reasons. The sensitivity to doxycline of the strains isolated was assessed by a disc method. Five (11 per cent.) of the 41 strains showed 'moderately decreased sensitivity' [details are not given] but there was no correlation between the MICs for doxycline and for penicillin.

All patients received 300 mg. doxycline orally as a single dose, and test of cure, which consisted of direct microscopy and culture, was performed at 14 days. Treatment was successful in 34 (83 per cent.) of the 41 patients. Six of the seven treatment failures were in males and three in patients with organisms showing moderate resistance to doxycycline. Doxycycline treatment was successful in all of 23 patients whose organisms had a MIC for penicillin of 0-2 U/ml., all the failures occurring with the more penicillin-resistant strains.

The author concludes that most patients with gonorrhoea caused by organisms with decreased sensitivity to penicillin can be cured with a single dose of 300 mg. of doxycycline. **Leslie Watt**

**Single-dose Treatment of Gonorrhoea with the Ultralong-acting Sulphonamide Sulfametopyrazine**

(Einzeitbehandlung der Gonorrhoe mit dem Ultralangzeitulfonsalz Sulfamethoxypyrazin) **PETZOLDT, D., and KREMPFL-LAMPRECHT, L.**(1970) *Dtsch. med. Wschr.*, 85, 563 21 refs

From the Dermatological Clinic and Polyclinic of the University of Munich the authors report their results in the treatment of 37 patients, 29 men and 8 women, with uncomplicated acute gonococcal urethritis with a single 2-g. tablet of the ultralong-acting sulphonamide sulfametopyrazine (sulfalene, sulphaethoxypyrazine). In each case the diagnosis was established by means of stained slides and cultures. Some of the strains of gonococci isolated were tested *in vitro* for sensitivity to sulfametopyrazine. Follow-up examinations were undertaken between 3 and 9 days after treatment, and treatment failures were then treated with penicillin or oxytetracycline.

Of the thirty patients who returned for follow-up, only three had been cured by the treatment, a failure rate of 90 per cent. *In vitro* all of fourteen strains of gonococci tested were resistant to sulfametopyrazine in a concentration of 25 μg./ml. and only nine were inhibited by 30 μg./ml.

The authors conclude that sulfametopyrazine is not suitable for the treatment of gonorrhoea. After a brief review of the literature they also conclude that single-dose treatments of gonorrhoea should be undertaken only with antibiotics like penicillin which give very high cure rates. **R. D. Catterall**

**One-session Treatment of Gonorrhoea in Males with Procaine Penicillin plus Probencid**

**COBBOLD, R. J. C., MORRISON, G. D., SPITZER, R. J., and WILCOX, R. R.**(1970) *Postgrad. med. J.*, 46, 142 17 refs

A single-dose treatment for gonorrhoea in men is preferred on grounds of convenience and economy and a commonly used method is to give a single intramuscular injection of 1-2 mega units procaine penicillin. However, failure rates as high as 12 per cent. have been reported, and some workers have doubled the dosage in an effort to improve the cure rate whereas others have preferred not to do this. An alternative to increasing the dose or antibiotic is to administer a renal tubular blocking agent which delays the excretion of penicillin. Such an agent is probenecid and the authors of this paper recorded the results of their treatment with the two preparations at St. Mary's Hospital, London, of 613 men suffering from gonococcal urethritis. The effect of an intramuscular injection of procaine penicillin (1/2 mega units) was compared with that of a similar dose of penicillin together with 1 g. probenecid orally, the treatments being given to alternate patients.

The patients were asked to return 2 to 3 days later and it was intended to perform follow-up tests at intervals for up to 12 weeks, but many patients defaulted. Of the 306 patients given procaine penicillin alone, 261 were followed up; based on a history of no further sexual exposure there were 25 failures in the first week after treatment and a total of 36 failures (13.8 per cent.). Of the 307 men given probenecid as well, 264 were followed up and the failures of treatment were reduced to nine in the first week and to a total of eighteen (6.8 per cent.). Using two other methods of assessment (described), the results were still significantly better when probenecid was given as well as procaine penicillin.

It is concluded that the addition of probenecid should prolong the useful life of a single injection of procaine penicillin for the treatment of gonorrhoea. **Eric Dunlop**

**Gonorrheal Urethritis in Males treated with a Single Oral Dose of Minocycline**

**THATCHER, R. W., FAZIN, G., and DOMESK, G.**(1970) *Publ. Hlth Rep. (Wash.)*, 85, 160 7 refs

The authors of this paper draw attention to the increasing resistance to penicillin of the gonococcus and stress the need for the investigation of new drugs for the treatment of gonor-
among the crew from an aircraft carrier visiting the Philippines for 6 days, 2,191 men admitted sexual contact with a group of females known to have a prevalence of 19-7 per cent. of N. gonorrhoea infection. The mean number of consorts visited by each man was 1.2, and 77 per cent. of the men did not use prophylaxis. After the liberty period 88 cases of gonorrhoea were actually observed among the males in the shipboard population. With this information a risk estimate was developed and it appears that the risk of acquiring gonorrhoea by contact with an infected female is about 22 per cent. The case is described of a man aged 22 years admitted to the United States Naval Hospital, San Diego, California, because of abdominal pain. This was in the right upper quadrant and epigastrium with radiation to the right scapula. He had been treated 3 weeks previously for gonococcal urethritis with 2-4 mega units aqueous penicillin intramuscularly and a 3-day course of a triple sulphamamide by mouth. The discharge and dysuria had decreased but not disappeared by the time of admission. Examination showed tenderness and guarding in the right upper quadrant with a positive Murphy's sign. The liver was enlarged with a tender sausage-shaped swelling at its lower margin. The meatus was inflamed but no discharge could be produced. Culture of blood, urine, stool, and prostatic fluid did not reveal any pathogens. Intramuscular procaine penicillin 1-2 mega units was given twice daily for a total of seven doses with rapid clinical response. Subsequently a percutaneous transpleural liver biopsy was performed. Culture of the liver core grew gonococci confirmed by sugar fermentations, but the histological picture showed normal liver tissue and a Gram stain was negative. It was assumed that the organism was on the liver surface and not in the liver itself. The patient was given further procaine penicillin 1-2 mega units intramuscularly twice daily for 10 days, after which a liver biopsy specimen was sterile on culture. Although peritonitis has been described in females this seems to be the first recorded case in a male. Peritoneal localization was possibly the result of a bacteraemia or the organism may have travelled via the retroperitoneal lymphatics.

P. Rodin

Reactivity of Two Selected Antigens of Neisseria gonorrhoea REISING, G., SCHMALE, J. D., DANIELSSON, D. G., and THAYER, J. D. (1969) Microbiol., 18, 337 3 figs, 7 refs

This study from the Venereal Disease Research Laboratory, Atlanta, Georgia, reports the reactivity of two selected antigen preparations from a strain of virulent Neisseria gonorrhoea – the soluble antigen (SA) and a fraction (FI) thereof – in the complement-fixation test. Tests were performed on the sera from 98 male and 102 female cases of gonorrhoea. Diagnosis was confirmed by culture on Thayer-Martin medium. Sera from 50 male and 58 female blood donors, presumed free of gonococcal infection, were used for comparison.

None of the sera from the blood-donor group reacted with the FI, but two sera from males (4 per cent.) and two from females (3-3 per cent.) reacted with the SA. Among the patients with gonorrhoea, 27 (27-6 per cent.) of the sera from males reacted with the SA and twenty (20-4 per cent.) with the FI; in female gonorrhoea the reactivity rate was higher with both antigens – 98 (88-2 per cent.) with the SA and 73 (71-6 per cent.) with the FI.

The authors suggest reasons for the positive reactions with the SA in the control group and for the wide difference in sero-reactivity between the sexes in gonorrhoea. They conclude that the SA and FI would be very useful antigens to employ in the development of a serological test for the detection of gonorrhoea in asymptomatic females, but that these antigens should be improved or replaced by others in the case of males.

C. S. Ramatunga
Recovery of the Gonococcus from Exudates dried on Filter Paper  
PAIT, C. F., and CONWAY, A. (1970)  
Hlth Lab. Sci., 7, 30

It is generally assumed that Neisseria gonorrhoeae survives poorly in conditions of dryness and moderate temperature; at the laboratories of the Orange County Health Department, Santa Ana, California, the authors have investigated the survival of the organism in clinical material under these conditions.

A specimen of urethral exudate from each of 26 men suffering from acute gonorrhoea was taken on to two Dacron swabs. One of these swabs was plated directly on Thayer-Martin medium; the other was rubbed on to a strip of sterile filter paper which was allowed to dry and then placed in an aluminium foil envelope for submission to the laboratory. The directly-plated cultures were incubated in candle-jars at 35 C. for up to 48 hrs and examined for growth of N. gonorrhoeae. The envelopes containing inoculated filter-paper strips were kept at room temperature (75-80 C.) for 20 to 24 hrs before being placed on 10 per cent. blood agar plates. These plates were inoculated in candle-jars at 35 C. for 48 hrs, the strips being removed at 48 hrs; they were then examined for growth of N. gonorrhoeae.

N. gonorrhoeae was isolated from 25 of 26 patients by direct plating and from eleven out of 26 by the indirect technique. A higher proportion of isolates would be expected in the second group if Thayer-Martin medium had been used here also. The authors suggest that improved culture techniques or a change in the resistance of the organism could account for the better than expected survival on the paper strips. However, they point out that the former suggestion seems to be unlikely as the medium used in the experimental group was simply 10 per cent. blood agar; any increased resistance of N. gonorrhoeae to adverse conditions does not seem to be reflected in a change in the epidemiology of gonorrhoea.

Gordon Scrimgeour

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Treatment of Gonorrhoea by Penicillin and a Renal Blocking Agent (Probenecid)  
HATOS, G. (1970)  
Med. J. Aust., 1, 1096

10 refs

Use of Vancomycin, Colistimethate, Nystatin Medium to Transport Gonococcal Specimens  
ROBINSON, M. H., HICKS, C., and DAVIDSON, G. (1970)  
Publ. Hlth Rep. (Wash.), 85, 390 7 refs

Specific and Non-Specific Immunofluorescent Reactions shown by Different Preparations of FITC-labelled Rabbit Anti-Gonococcal Globulin  
LIND, I., and RHODES, J. M. (1970)  
Acta path. microbiol. scand., 78B, 153 4 figs, 24 refs

Non-gonococcal urethritis and allied conditions

Nitriderazine, a new systemic trichomonicide (La nitriderazina, un nuovo tricomiconida sistemico)  
CANTONE, A., DECARNERI, I., EMALENI, A., GIRALDI, P., LOGEMANN, W., LONGO, R., MEINARDI, G., MONTE, G., NANNINI, G., TOSOLINI, G., and VITA, G. (1969)  
G. Mal. infett., 21, 954

Nitriderazine (1:1-(N-β-ethylnorpholine)-5-nitrimidazole) has a similar activity against Trichomonas vaginalis in vitro to that of metronidazole. In experimental infections in mice it appears less effective than the latter drug but it has given good results by the oral route in human subjects; cure rates of 94 per cent. in 176 subjects are quoted. The rates of excretion appear to differ in the two species, the excretion of nitriderazine in the urine being less than that of metronidazole in the mouse while the reverse holds in rats and man. The metabolic breakdown of nitriderazine in man is stated to be less than with metronidazole; the two principal breakdown products found in the urine come from oxidation of the morpholine ring and both show trichomonicidal activity.

In tests in vitro the minimal trichomonicidal level of nitriderazina against eight strains of T. vaginalis ranged from 0.3 to 3.0 μg./ml.; for metronidazole the levels were 0.3 to 6.0 μg./ml. In four patients given 250 mg. nitriderazina orally twice daily for 5 days, the blood level was at least three times the amount needed to kill T. vaginalis even 14 hours after administration of the drug. After interruption of treatment the urine remained trichomonicidal for 48 hrs but not thereafter, showing that cumulation did not occur with this dosage. The drug is also absorbed after local vaginal treatment, and it is said that by this means therapeutic levels are reached in the blood.

Studies on animals treated with large doses over long periods have shown it to be well tolerated and not to interfere with organogenesis.

A. E. Wilkinson

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Method for Isolation and Identification of Corynebacterium vaginale (Haemophilus vaginalis)  
DUNKELBERG, W. E., JR., SKAGGS, R., and KELLOGG, D. S., JR. (1970)  
Appl. Microbiol., 19, 47 8 figs, 17 refs

Effects of Pelvic Inflammation associated with the Intra-uterine Device  
ELSTEIN, M. (1969)  
Int. J. Fertil., 14, 275 4 figs, 2 refs

Inclusion Conjunctivitis in the Newborn Infant  
GOSCIENSKI, P. J. (1970)  
J. Pediat., 77, 19 4 figs, 25 refs

Antibiotics and chemotherapy

In vitro Comparison of Erythromycin, Lincomycin and Clindamycin  
PHILLIPS, I., FERNANDES, R., and WARREN, C. (1970)  
Brit. med. J., 2, 89 8 refs

Lincomycin resembles erythromycin in its antibacterial spectrum and is active against erythromycin-resistant strains of Staphylococcus aureus; in general, however, organisms sensitive to both antibiotics tend to be more
sensitive to erythromycin. Clindamycin (7-chlorlincomycin), a newly developed derivative of lincomycin, has been reported to be much more active than the parent substance. The authors of this paper from St. Thomas's Hospital, London, have therefore compared the activity of these three antibiotics in vitro against organisms recently isolated from clinical material by determining minimum inhibitory concentrations (MICs) on solid media at pH 7 after incubation at 37°C for 48 hrs.

Against β-haemolytic streptococci (43 strains), Streptococcus viridans (27), Strept. pneumoniae (25), and erythromycin-sensitive Staph. aureus (106), the activity of clindamycin was comparable or slightly superior to that of erythromycin, the MIC of clindamycin being <0.25 μg/ml against all and that of erythromycin <0.5 μg/ml against 98 per cent. of these organisms. Lincomycin was less active than either of the others against this group, and particularly against erythromycin-sensitive Staph. aureus (MIC >0.5 μg/ml against 39 of 106 strains). Of 137 strains of erythromycin-resistant (MIC >32 μg/ml) Staph. aureus, only three were similarly resistant to both lincomycin and clindamycin; against the remaining 134, the MIC of lincomycin ranged from 2.0 to 0.12 μg/ml and that of clindamycin from 0.12 to 0.06 μg/ml. In general, clindamycin was more active than the other drugs against fourteen strains of Clostridium welchii. In contrast, erythromycin was somewhat more active than clindamycin against Haemophilus influenzae (36 strains) and much more active against Strept. faecalis (12) and Neisseria gonorrhoeae (82), lincomycin again being the least active of the three.

The results with clindamycin in vitro justify clinical trials in infections for which erythromycin is at present indicated, with the exception of gonorrhoea and Strept. faecalis infections. John A. Raeburn

National Survey of Venereal Disease treated by Physicians in 1888 FLEMING, W. L., BROWN, W. J., DONOHUE, J. F., and BRANIGIN, P. W. (1970) J. Amer. med. Ass., 211, 1827 1 fig., 3 refs

The Private Physician and Venereal Disease. Control in the Western Pacific Region WILCOX, R. R. (1970) Brit. J. clin. Pract., 24, 97

Miscellaneous

A New Sign in Behçet's Syndrome DAVIS, E., and MEIZER, E. (1969) Arch. intern. Med., 124, 720 3 figs, 5 refs

Thirteen patients with the major features of Behçet's syndrome were examined at the Hadassah University Hospital, Jerusalem. The anterior half of the dorsum of the tongue was viewed by slit-lamp or eye microscope at a magnification of x16. The tip of the tongue normally shows many fungiform papillae which occupy about 80 per cent. of the microscopic field. Filiform papillae become more prominent on the rest of the accessible tongue as one proceeds from the tip posteriorly but fungiform papillae are still plentiful. Fungiform papillae were absent or scanty in eight and significantly reduced in three of the thirteen patients. Twelve had received steroids and it was not possible to say if the changes in the tongue were related to this.

The only disease previously described with marked reduction of fungiform papillae was the Riley-Day syndrome (familial dysautonomia). Eight of 150 patients seen in a general medical out-patients department who were of similar age to those with Behçet's syndrome showed substantial reduction of fungiform papillae. None of forty healthy persons in the same age range showed this picture. Normal fungiform papillae were found in six patients with severe aphthous ulcers and in five patients with uveitis but no other clinical signs. It is thought that the sign may be helpful in differentiating the uveitis of Behçet's syndrome from other types. The difference from the normal in Behçet's syndrome is usually so striking, that a good hand lens used with clear illumination is adequate for screening purposes. [No evidence is given to show that this sign is present in early cases or those with partial features of Behçet's syndrome when diagnosis is often most difficult.]

P. Rodin

Cat-Scratch Disease. Notes on Its History CARITHERS, H. A. (1970) Amer. J. Dis. Child., 119, 200

Primary Herpes Simplex

NALLY, F. P., and JAMES, J. D. (1970) Oral. Surg., 29, 680 80 refs

Variability of Herpes Simplex Virus: Isolation of Two Variants from Simultaneous Eruptions at Different Sites TERNI, M., and ROIZMAN, B. (1970) J. infect. Dis., 121, 212 2 figs, 13 refs

Herpes Simplex Virus Infection in Infants: A Spectrum of Disease TORPHY, D. E., RAY, C. G., MCGALISTER, R., and DU, N. H. (1970) J. Pediat., 76, 405 11 refs

Type 1 and Type 2 Herpes Simplex Viruses: Serological and Biological Differences PLUMMER, G., WANER, J. L., PHUANGSAB, A., and GOODHEART, C. R. J. Virol., 5, 51 7 figs, 12 refs

Cellular Manifestations of Primary and Recurrent Herpes Genitalis NG, A. B. P., REAGAN, J. W., and LINDNER, E. (1970) Acta cytol. (Philad.), 14, 124 8 figs, 23 refs

Follow-Up Studies in Oral Leukoplakia SUGAR, L., and BÁRNYCZY, J. (1969) Bull. Wld Hlth Org., 41, 289 16 refs