often encountered in these cases and the risk of post-operative fungous infection.

Mr. O. S. TUBBS (London) said they could now expect to cure cases of actinomycosis by giving large doses of penicillin over long periods. He also discussed the indications for surgery. Dr. E. DROUHET (Paris) reviewed a large range of fungicides many of which are, unfortunately, too toxic for clinical use. He dealt with antibiotics under three groups—those which are antibacterial, those which have both antibacterial and antifungal activities, and the purely antifungal agents. This last group included cycloheximide and the polyenes (nystatin and "amphotericin B"). With the latter group a new horizon has opened, as was confirmed by Dr. M. L. FURCOLOW (Kansas), who described encouraging preliminary results from the use of amphotericin B in the treatment of cryptococcosis (torulosis) and histoplasmosis. Laboratory and clinical studies suggested that this agent might prove a "broad-spectrum" antifungal antibiotic.

Dr. G. T. STEWART (Croydon) concluded this session by considering the mode of action of various substances active against pathogenic fungi and illustrating their effect on fungus morphology. Most of these drugs were fungistatic, though fungicidal activity was occasionally achieved at therapeutic levels with polyene, diamidine, and oxyquinoline substances. The active compounds had in common the property of unsaturation, and he suggested that the polyenes act by a highly specific interference with a critical phase of dextrose metabolism.

Gynaecology

With Professor W. C. W. NIXON (London) as chairman, Professor I. DONALD (Glasgow) opened the session on gynaecology on the last day by reviewing the clinical features of vulvo-vaginal moniliasis. Monilial infections accounted for a significant number of cases of vaginal discharge even in the absence of both glycosuria and pregnancy, and the high incidence of carriers of *C. albicans* made it essential to adopt scrupulous techniques in vaginal examination if transference of infection was to be avoided: perfunctory rinsing of gloves in antiseptics between patients was inexcusable. In a gynaecological out-patient department the only practical way of preventing cross-infection was to use a fresh sterile pair of gloves for each examination. Subpreputial infections in the male might also be a source of female infection. Nystatin would often relieve the symptoms of vulvo-vaginal moniliasis after one day of treatment. Eight-four per cent. of pregnant patients had been cured symptomatically and culturally of *C. albicans* infection, 13% relapsing. Similar good results had been obtained in non-pregnant patients without glycosuria, and also in diabetics provided the glycosuria was controlled. Where it appeared that an infected cervix accounted for recurrences of infection, he recommended diathermy conization of the endocervix. Although so far there was no evidence of the development of fungal resistance to nystatin, excessive use of this drug should be avoided. Dr. R. F. JENNISON (Manchester), supporting these observations, quoted his own results from a trial comparing the results of treatment of vaginal moniliasis with nystatin or 1% gentian violet; failures in the nystatin group were all in pregnant subjects.

Dr. SYLVIA DAWKINS (London) gave the results from her survey of the incidence of yeasts in vaginal secretions in pregnancy. *Candida albicans* occurred no more frequently in later pregnancy (12–15%) than at 16 weeks, but its incidence was significantly reduced in the post-partum period. In all her patients with severe pruritus *C. albicans* was isolated on culture, an isolation rate four times that in patients without this symptom; but other yeasts were less frequent in patients with pruritus. There was the same positive correlation between the incidence of *C. albicans* (but not other yeasts) and severe or moderate vaginitis, vulvitis, and curdy discharge as had been observed in a previous series of non-pregnant subjects. There was no significant incidence of *C. albicans* in babies' mouths up to 10 days of age. In the discussion it was stated that women might acquire vulval infection from paronychial infection of their hands and that a high percentage of the mothers with babies suffering from thrush had been found to have moniliasis.

Paediatrics

For the final session on paediatrics Professor A. A. MONCRIEFF (London) took the chair. Dr. J. B. BOUND (Blackpool) described monilial infection as a definite and characteristic type of napkin rash to be differentiated from excoriated buttocks, seborrhoeic and ammonia dermatitis. While emphasizing the importance of any monilial infection in the mother, he pointed out that less than one-third of these babies with monilial napkin rash had oral lesions. Dr. M. BODIAN (London) described necropsy findings in infants and children with secondary moniliasis. In the neonatal period secondary moniliasis was found only in babies who had associated congenital deformities. Later in childhood, although it might occur in any debilitating state, the condition was particularly associated with leukaemia, nephrosis, or the prolonged administration of antibiotics as in the treatment of children with bronchiectasis and fibrocystic disease. Dr. I. A. B. CATHIE (London) said that in children moniliasis was almost invariably secondary to debility from some infective or nutritional cause.

Dr. J. MARTIN BEARE (Belfast) reviewed the treatment of ringworm in children, and emphasized the importance of diagnosing by culture the particular fungus responsible. He advised *x*-ray epilation in all cases of *Microsporum audouini* infection of the scalp, although this was disputed by some in the audience; he believed that other types of tinea capitis could be treated by topical application.

The particular value of small symposia of this kind, with restricted audiences, was evident from the lively, informed, and critical discussion sessions. The proceedings of the symposium, which was supported by a grant from Messrs. E. R. Squibb and Sons, will be published in full in due course.

JOINT MEETING OF AMERICAN AND BRITISH CLINICAL PATHOLOGISTS IN LONDON

On July 9 and 10 the Association of Clinical Pathologists and the American Society of Clinical Pathologists met in joint session in London. On the first day the American pathologists, assisted by some of their British colleagues, demonstrated a "workshop" on clinical haemoglobinometry. The workshop is a form of practical tutorial which the American Society has found useful, and this was the first extension of the idea to Europe. The workshop was held at the Royal Army Medical College, Millbank. On the second day papers were read and discussed at the Royal Society of Medicine.

Workshop on Clinical Haemoglobinometry

The director, Dr. F. WILLIAM SUNDERMAN, introduced the workshop himself, ably assisted by Dr. VERNON E. MARTENS, of America, and Dr. ARTHUR JORDAN, of Sheffield, while the surgeon-general of the United States Navy, Rear-Admiral HOGAN, assisted in its preparation, as he had done previously in America. Dr. M. LUBRAN (London) acted as assistant director, and a number of prominent clinical pathologists from both sides of the Atlantic took part as demonstrators. The 62 participants, ranging from registrars to consultants, were taken through all the stages of haemoglobinometry, from the calibration of pipettes to spectroscopy, being treated to an admirable survey of present-day practice. The British pathologists also gained valuable experience of this new method, thanks to the excellent arrangements made by Dr. Sunderman and his colleagues.

Papers at the R.S.M.

Dr. E. M. DARMADY and Miss FAY STRANACK (Portsmouth) opened the proceedings with a summary of their work, which attempts to correlate function with anatomy in

familial metabolic diseases associated with abnormalities of the renal tubules. Histological and microdissection techniques were described, and photomicrographs of the tubules in the Fanconi syndrome, familial nephrosis, vitamin-D-resistant rickets, and pitressin-resistant diabetes insipidus were shown. The pictures illustrated the "swan neck" lesions of the tubules in Fanconi disease, the narrow neck of the junction of the glomerulus and the tubule in familial nephrosis, the undifferentiated tubule in familial pyelonephritis, the increased translucency in the vitamin-D-resistant group, and the calcium-like plaques on the proximal tubules in cases of hyperchloraemic acidosis.

Dr. JOAN TAYLOR (Salmonella Reference Laboratory, P.H.L.S.) demonstrated the technique of testing the pathogenicity of *Bact. coli* by means of ligated rabbit gut. This method, which depends on a reaction of dilatation and inflammation in the isolated gut, assists in differentiating pathogenic from apparently non-pathogenic strains of the same serotype.

Dr. G. WETHERLEY-MEIN and his colleagues from St. Thomas's Hospital, London, discussing the mechanism of anaemia in leukaemia, showed that there was an occult haemolysis as demonstrated by radioactive isotope techniques with labelled iron and chromium. The pattern of uptake and disposal showed no specific pattern except in chronic myeloid leukaemia, where there was a high plateau of uptake in the liver. Curves were demonstrated showing combinations of aplasia, hypoplasia plus degrees of haemolysis, and normal patterns, the clinical picture depending on the degree of compensation or decompensation. A film from the Westminster Hospital on the cytological variation in monocytic leukaemia ended the morning session.

In the afternoon Dr. MAGNUS HAINES (Chelsea Hospital for Women) gave a short résumé of the clinical manifestations of endometrial tuberculosis. Any type of menstrual abnormality could occur—from menorrhagia to amenorrhoea—and vaginal discharge was common. The condition had been found after abortion and ectopic pregnancy, in puerperal patients, and associated with post-menopausal bleeding. A history of previous tuberculous infection was given in 50–80% of cases. Pathologically the main investigation was endometrial biopsy with culture and guinea-pig inoculation. Tiny non-caseating granulomas were found histologically at the edge of an endometrial gland, but to avoid missing them it was essential to examine more than one section. The best time for curettage was within a week of the expected onset of a period. Dr. Haines preferred guinea-pig inoculation to culture for confirmation of tuberculous infection and obtained a high percentage of positive results.

Dr. H. A. SISSONS (Institute of Orthopaedics, London) demonstrated the value of radiographic methods in bone pathology, thin slices of osteogenic sarcoma, for example, showing areas of "tumour bone" not revealed by *x*-ray examination before operation. Rarefaction of bone following immobilization was also much more dramatically demonstrated by this method. The slices of bone were embedded in polymerized "perspex," and the very thin sections showed up great differences in density in the bone, the greyer Haversian systems indicating newer bone. Dr. M. J. H. SMITH ended the session with a discussion on the biochemistry of salicylate poisoning.

Preparations and Appliances

ROLLER CRUTCHES FOR RHEUMATOID ARTHRITICS

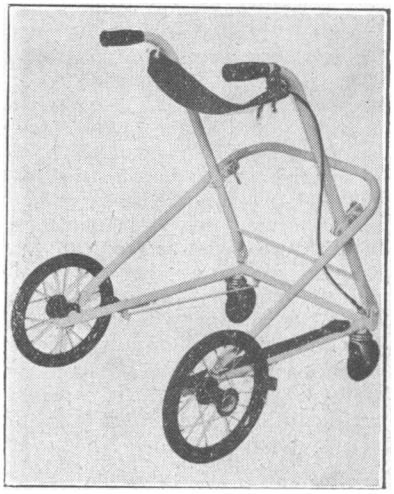
Dr. W. S. TEGNER, physician-in-charge, department of physical medicine, London Hospital, writes: A rheumatoid arthritic may have great difficulty in using conventional crutches, owing to arthritis of the elbows and hands in addition to the affliction of the hips and knees. In the course of treating such arthritics Miss S. G. Orme, principal of the London Hospital School of Physiotherapy, and her staff have designed a form of roller crutches which have proved to be a great help to such patients.

Trough supports are used for the forearms, and the crutches are mounted on eccentric roller bearings. The following advantages are gained: (1) stability is obtained, and the patient does not have to worry about learning the alternative crutch-and-leg gait. Support is continuous, and the patient never has to feel relatively unsafe when lifting crutches. The roller crutches have a heavy base, and there is no danger of a crutch ferrule slipping. (2) No help is needed in getting the crutches into position; therefore the patient feels more independent. The patient can move continuously, not with the stilted crutch gait, and can turn without losing support owing to the eccentric arrangement of the rollers.

These crutches are now manufactured by Remploy Ltd., of Queensway, Croydon, from whom they can be obtained.

WALKING-AID FOR PARAPLEGICS

Dr. R. S. ALLISON, senior physician, department of neurology, Royal Victoria Hospital, Belfast, writes: I should like to draw attention to a new type of walking-aid which has proved to be a great help to many patients suffering from spastic or ataxic paraplegia. Designed originally by Mrs. James Kirkpatrick, of Ballynagashel House, Ballymoney, N. Ireland, the original model, of which an illustration is given, was constructed to her specification locally. Since then it has been patented, and an improved lightweight model is now available.



The apparatus has the advantage of being relatively small, light, and compact. It can be folded and carried easily in the back of a car or by hand. The base is mounted on four wheels and is secure enough to prevent accidental overturning. When in use as a walking-aid, the patient's weight is distributed over the upper as well as the lower limbs, the hands grasping the handles and the trunk being tilted slightly forwards in the act of walking. Speed is regulated by a brake, and the wheels can be locked in position when desired so as to afford firm support in standing. The apparatus can also be converted into a temporary seat by means of an adjustable canvas sling so that such activities as washing or household duties can be performed with safety.