a matter of common experience that the occurrence of inflammatory ear complications, in any given exanthematous case, is far more likely in childhood than in adult life.

The reason for this is not clear, but is usually alleged to be due to the presence of adenoids in the child, and the cleaner nose and nasopharynx in the adult. Although this explanation may hold good for exanthematous cases, it is noteworthy that persons who have frank intranasal suppuration, such as ethmoiditis and atrophic rhinitis, are not apparently more prone to acute otitis media, during influenzal epidemics, than those with clean noses. Some modern immunological investigations suggest that some localized tissue immunity is conferred by the presence of chronic sepsis, and if this is so, it may explain why these cases resist the acute infection.

Nasal obstruction appears to be a factor in favouring the incidence of otitis media, though I am of opinion that persons who have a little or only partial structural obstruction are more prone to acute ear trouble than those who are marked mouth breathers at all times, and have practically no physiological nasal function.

Nose breathers are quickly obstructed to some degree by the swelling of the turbinates and mucous membrane consequent on the acute catarrhal infection of the airway, and efforts to breathe through the nose, or to clear it for this purpose, are a potent mechanical factor in carrying infection to the middle ear. I believe that a patient whose nose becomes quickly occluded by an infection of the upper airway would be wise to avoid all efforts at attempting to clear it, and accept the role of mouth breather for the time being, until the turgescence gives way; just as patients should do for the first two or three days following a nasal operation. There is, however, a popular belief that mouth breathing is a stigma, and persons holding this view strongly will continue to make violent efforts to clear the air passages.

The greatest danger to the ear arises, not during the turgent stage of acute rhinitis in influenza, but in the subacute stage, when the stuffy swollen feeling has given way to a serous secretion, and the latter is passing into a muco-purulent form of discharge. The patient begins then to find the airway clearing, and delights in blowing his nose vigorously, to establish breathing and nasal comfort, but is unfortunately inflating his middle ears and may finally succeed in forcing some septic material into a tympanic cavity not yet infected. This seems to be the correct mechanical interpretation of what so frequently happens in these cases, and the natural corollary as to the line of treatment would appear to be obvious—namely, to avoid blowing the nose with both nostrils occluded. The use of the handkerchief would be wisely limited to wiping away any secretion which escaped from the nostrils, and any secretion falling on the soft palate from the posterior nares should be sniffed into the pharynx and expectorated.

Local treatment to the nose in any liquid form is contra-indicated, and is likely to be harmful. Vapours, such as those of menthol and benzoin co., may be soothing and are certainly harmless. The skin and bowels should be kept acting freely to eliminate, as quickly as possible, the toxic cause of the nasal turgescence and infection. To maintain the effective and almost continuous free action of the skin, the latter should be carefully covered from the air, until the pyrexia has disappeared. This is a point of the greatest practical importance; I have tested its value on many occasions.

Treatment

Now I come to the question of how to treat the ear, whether expectantly throughout, or by early myringotomy.

If expectantly, the prevailing custom is to use carbolic acid and glycerin in the external meatus in varying

strengths of from 2 to 10 per cent., and await the subsidence of the inflammation or the rupture of the membrane, with suppuration, should no mastoid complications supervene.

If the treatment is by early myringotomy, this is done on the plea that it relieves pain and tension. The old indication for incision of the membrane was a bulging drum-head, hence the name of paracentesis, as applied to the operation; but from what I can hear nowadays, there is a new school which incises practically every inflamed membrane. This is a grievous mistake, and will yield the most uncertain and doubtful, if not positively harmful, results. Routine surgery is bad surgery, and there is no need for it, if we take the trouble to study our physiological guide and ask what Nature is trying to do by means of *vis medicatrix naturae*.

All these acute middle-ear infections are either streptococcal or pneumococcal, or both, and the pyrexial reaction is considerable and only subsides when some degree of immunity has set in, which usually takes two or three days.

To inflict any type of trauma, even surgical, upon inflamed tissues during this period of active reaction is to impair the chances of rapid recovery, if not to damage them seriously; but when the reaction has subsided, owing to the establishment of immunity, the position becomes entirely changed. As a matter of fact, when we see a bulging drum-head we have practically arrived at the latter stage.

If the primary airway infection has caused a sharp pyrexia, which has subsided, and this is followed by a middle-ear inflammation with only a mild reaction, an early myringotomy may be done (should indication for its performance, such as bulging drum-head, pain, and tension, be present) with the expectation of a satisfactory result; but if the earlier airway reaction was mild, and the middle-ear one severe (perhaps in the latter due to a new or more virulent organism), then time must be allowed for the establishment of some immunity, as evidenced by the fall in temperature, before inflicting even a surgical trauma on the inflamed tissues; in short, never operate in the hot stage, and it may become unnecessary in the cold.

DISEASES OF THE HIP-JOINT AND ITS IMMEDIATE NEIGHBOURHOOD*

BY

JAMES F. BRAILSFORD, M.D., M.R.C.S.

HONORARY RADIOLOGIST, THE ROYAL CRIPPLES HOSPITALS, BIRMINGHAM

For the diagnosis of most diseases a careful correlation of the clinical, laboratory, and radiographic findings must be made, but these individual means of diagnosis are not always of the same value. There are diseases the diagnosis of which rests almost entirely upon the clinical, or the laboratory, or the radiographic findings. In the diagnosis of hip-joint disease the radiographic appearances are of the first importance, because a number of different pathological conditions give almost identical signs and symptoms. Frequently the radiograph is diagnostic, and reveals a pathological condition of much graver significance than the clinical findings suggest. In the adult, for example, radiographs have revealed fractures of the femoral neck in patients who have been treated for weeks or months for sciatica following a trauma so slight that the clinician has apparently not thought of the possibility of fracture. Again, it is not infrequent for the radiograph to show the typical appearance of Paget's disease or

* Abstract of paper delivered in Belfast to the Ulster Medical Society.

secondary carcinoma of the bone in cases which have been regarded as chronic sciatica.

An examination of the radiographs of hip-joints during the past five years at the Royal Orthopaedic Hospital, the Warwickshire Orthopaedic Hospital, the Queen's Hospital, and the Carnegie Infant Welfare Centres, Birmingham, has shown the following pathological conditions:

In Persons under 20			
Congenital dislocation of the hip-joint	88	Syphilis	4
Tubercle	60	Tumours	4
Perthes's disease	38	Fracture of femur neck	3
Septic arthritis	27	Dislocation of hip-joint	3
Slipped epiphysis of femur	26	Myositis ossificans	3
Infantile coxa vara	15	Osteochondrodystrophy	3
Rachitic coxa vara	15	Cyst in femur neck	2
		Haemophilic changes	1
In Persons over 20			
Osteo-arthritis	130	Secondary carcinoma	8
Chronic arthritis	73	Sarcoma	3
Septic arthritis	30	Cyst of femur neck	2
Fracture of femur neck	30	Syphilis	2
Paget's disease	12	Charcot's disease	1
Dislocation of hip-joint	10	Hydatid	1

For success in the treatment of most of these conditions, particularly those occurring in the child, early diagnosis is essential. While it can be said that certain cases of tubercle of the hip-joint do not show radiographic changes in the very early stages, one should not be deterred from having a radiograph taken, as this often reveals greater destructive changes than are suggested by clinical examination. The radiographic findings prove that the earlier a congenital dislocation is detected and treated the better the final result. The condition of infantile coxa vara has been diagnosed from a radiograph in a child of 7 months. This condition shows some of the features of Perthes's disease, in that the bone of the femoral neck becomes fragmented, softened, plastic, and yielding to pressure. As a general rule the active phase passes after a few years, normal bone is laid down and a sound femur produced, retaining, however, the deformity caused by pressure on the disorganized structure during the active phase. The radiographic appearance of this and Perthes's disease suggests that if the "plastic" bone were put at rest and freed from pressure, little deformity would result. Slipping of the femoral epiphysis usually occurs without any marked trauma. Injuries which result in separation of epiphyses show on the radiograph that the lesion is not confined to the displacement of the epiphysis, but that fragments of the diaphysis are carried with it. Injuries near the end of bones not uncommonly result in fractures above the epiphyseal line, leaving the latter intact. Fracture of the femoral neck in children is relatively rare, but when it does occur the epiphysis is not usually displaced. When the epiphysis is displaced it is frequently impossible to get any history of trauma, and the radiographs do not show detached fragments of the femoral neck. The condition being frequently bilateral, radiographic appearances suggest that it is due to a shearing strain on a disorganized metaphysis. Deformities of the pelvis seen in children who have had rickets show remarkable improvement after orthopaedic treatment, marked coxa vara being almost completely restored to the normal. Radiographs of the adult show that a large proportion of fractures of the neck of the femur (about 50 per cent.) fail to unite, and that pronounced bone changes often occur in and around the hip-joint after dislocation. Early and obvious osteo-arthritic changes are not unusual. These factors have a very important bearing in compensation cases.

Paget's disease of bone is a much commoner condition than is usually taught. Its presence is often revealed by a radiograph of the pelvis years before the bending of the long bones might have caused the clinician to suspect it. Simple cysts in the neck of the femur may develop to such a size that fracture results from slight trauma ;

but some of them, having reached a certain size, cease to develop, and ultimately become surrounded by sclerosed bone, calcification of the contents occurring. Hydatid cysts of the bone may remain undiagnosed for ten or more years, and eventually lead to the patient's death. The first indication of malignant disease may be seen in the radiographic examination of a patient with persistent sciatica, erosion of the bone near the hip-joint resulting from secondary deposits.

A NOTE ON THE EPIDEMIOLOGY OF TINEA CAPITIS

BY

G. H. PERCIVAL, M.B., CH.B., PH.D., F.R.C.P. ED.

ASSISTANT PHYSICIAN, SKIN DEPARTMENT, ROYAL INFIRMARY,
EDINBURGH

The clinical appearances of microsporon and trichophyton infections of the scalp, and the varying distribution of the causative fungi according to geographical localization, are common knowledge. As less is known regarding the infectivity of the disease and its occurrence in epidemic and endemic form, a study of its incidence amongst Edinburgh school children for the past eighteen years may be of interest. During this period 2,701 cases of tinea capitis have been treated in this school population.

In Edinburgh all children attending education authority schools who are found to be suffering from ringworm of the scalp during routine school medical examination are segregated in a special school. This system has been in operation since 1912. Here, in addition to teaching, local treatment is carried out daily, though the children do not reside in the school. X-ray or thallium treatment is given at the Skin Department of the Royal Infirmary, Edinburgh, the local treatment being also supervised there. As has been reported in a previous paper on the treatment of scalp ringworm with thallium acetate, the period of isolation at the special school is about 135 days when epilation has been produced by x rays, and 113 days when thallium acetate has been used. The parents are told how to carry out local treatment at the week-ends, and are warned of the risk of infection to other children.

CHART I.—Yearly incidence of tinea capitis during the years 1912-1930.

During vacations treatment is entirely in the hands of the parents, but is still supervised at fortnightly intervals in the Skin Department of the Royal Infirmary.

The medical inspection of schools is conducted throughout each term, and is not concentrated on any particular part of a term. In addition to cases discovered during routine school medical examination, a small number of cases are first seen in the Skin Department, and are referred from there to the special school.

The curve of yearly incidence of tinea capitis (Chart I) shows that the disease remains endemic, in spite of strict medical inspection and supervision of treatment. There appears to have been a wave of increased endemicity during