upon the septum, especially upon the tubercle, and if all other possible causes of headache have been eliminated, partial removal of the hypertrophied bone should be advised, since in many such cases complete relief is given.

A NOTE ON RHINITIS CASEOSA.

By ARTHUR EDMUNDS, M.S., B.Sc., F.R.C.S.,
Demonstrator of Physiology, King's College, London; Surgeon,
Out-patients, Paddington Green Children's Hospital.

(From the Physiological Laboratory, King's College, London.)

A CASE of this interesting condition is reported by Mr. W. H. Kelson in the *BRITISH MEDICAL JOURNAL* for December 31st, 1904. The author gives an account of the cheesy material removed, which in his case consisted of a mass which was structureless except for a faint striation. It was composed of fatty material, and contained no cholesterin and no remains of epithelium.

Recently a case occurred in King's College Hospital, under the care of Mr. Arthur Cheatle, to whom I am indebted for an opportunity of examining this interesting deposit. The clinical features of the case were in no marked way different from those of Mr. Kelson's case, but the deposit differed very considerably.

It was a putty-like material with a very offensive faecal smell. It was yellowish in colour, and I expected to find that it was largely fatty in nature. On the contrary, however, it contained practically no fat. It gave only the very slightest reaction with osmic acid, and the ethereal extract left no greasy stain when evaporated.

The extract with chloroform contained cholesterin in small quantity, which gave Salkowski's test, and consequently was true cholesterin, not iso-cholesterin. On incineration, there was an extraordinarily large residue, mainly calcium phosphate.

On microscopical examination the deposit was seen to consist of a mass of needle-shaped crystals of calcium phosphate. These were embedded in a granular mass of detritus, none of the granules of which could be stained black with osmic acid. Staining with methylene blue gave no evidence of epithelial cells or other organized residue, but with iodine and sulphuric acid I was able to stain several hyphae of an unrecognizable fungus.

In discussing the etiology of this condition Mr. Kelson dismisses tuberculosis as a cause, and the subsequent rapid cure of these cases is certainly not suggestive of tuberculosis. The theory of its analogy with cholesteatoma is also difficult to reconcile with the absence of any epithelial remnants. The other theory suggested by Mr. Kelson is that it is a condition of chronic suppuration with retention. On the one hand the nature of the deposit in the case under my own notice is certainly very different from that of inspissated pus, while there is no evidence that there has ever been retention of pus, the deposit being found free in the nasal cavity.

There is, however, another condition which may be somewhat analogous—namely, the chronic catarrh which in the gall bladder is accompanied by the formation of calculi containing calcium compounds and cholesterin. Is it not possible that in rhinitis caseosa we have another mucous membrane in a state of chronic catarrh in which a similar process is taking place, leading to the formation of these pultaceous masses, secondary decomposition being responsible for the offensive odour?

CHRONIC SUPPURATIVE OTITIS MEDIA: THE NECESSITY OF EARLY, SYSTEMATIC, AND ENERGETIC TREATMENT.

By HENRY SMURTHWAITE, M.D.,
Newcastle-on-Tyne.

It is not my intention to enter at length into the origin of the disease of chronic suppurative otitis media. The greatest percentage of cases arise during childhood, and apart from the specific febrile diseases—of which scarlet fever claims the largest number—chronic catarrhal conditions in the middle ear is the starting point, the latter being dependent on adenoid vegetations in the postnasal space. Subsequently micro-organisms find their way up the Eustachian tube, or, it may be, by the blood or lymph channels, to the middle ear, and there set up conditions which result in acute inflamma-

tion of the lining membrane, with, finally, pus formation and perforation of the membrana tympani, the same tending to become chronic from lack of appropriate treatment.

In looking back over a period of years, facts stand out clearly before my view, and now in the light of riper experience I can unhesitatingly say that many a valuable life to the State might have been saved had early energetic treatment, systematically carried out, been adopted. But I think you will all agree with me that many of these cases of "running ears" have been left to cure themselves as best they could, or at most only a half-hearted endeavour to stay the mischief has been attempted. Of course, unfortunately most of such cases are to be found among the poor who have to battle with insufficiency of food and general unhygienic surroundings; nevertheless, this should make us not the less earnest in our efforts.

I am quite confident were I to go round the National Board schools in this town and examine the ears of the children attending those schools, I should find a large number suffering from discharging ears of a more or less mild or severe type; and, what is more, a large percentage of these cases were under no form of treatment whatever, their parents having no idea of its existence, or attached no importance to the same from pure ignorance of its possible danger.

When so much is nowadays being written and talked about the physical degeneration of the race, surely it is high time the State appointed medical men, as in Germany and America, to periodically examine children attending the national schools, who, apart from their recognizing and preventing the dissemination of the infectious diseases, would nip in the bud many early cases of suppurative ear disease which, if untreated, might ultimately terminate fatally, or lead to a more or less permanent deafness.

INFECTION BY WAY OF THE AUDITORY NERVE.

As certain facts bearing on my last remarks, I may instance 3 cases of death in the Royal Infirmary during the present year, the primary cause of which being directly attributable to old-standing and untreated middle-ear disease. In 2 of these cases the immediate cause of death was cerebral abscess, while in the third the patient died from acute septic lepto-meningitis. It is not generally recognized that septic mischief in the middle ear can reach the brain or its coverings by way of the labyrinth and auditory nerve, but that such is a fact this case fully illustrates.

CASE I.

The patient, with a pustular discharge from the ear, and showing signs of sinus thrombosis, was operated on, but on opening up the lateral sinus it was found quite patent. The mastoid and antrum were thoroughly cleared out, the wound dressed, and the patient sent back to bed. The following day death supervened, the patient having never regained consciousness from the time she was brought into hospital. At the necropsy it was found that, although the sinus and brain were quite healthy, there was pus in the subarachnoid space, which, while not extending over the convexities, was most marked on the cisterna basillia. Injection of the vessels was not a prominent feature, this stage evidently having given place to pus formation, of which there was a large quantity. No doubt, had this patient survived a few days longer, a cerebellar abscess would have resulted, for the pus was gravitating to the posterior fossa, and would, sooner or later, have burst through on to the surface of the brain, which point I suggested at the International Congress at Bordeaux this year when recording the case. Through the courtesy of Mr. Leech, whose patient the case had been, I made sections of the petrous bone, and by this means was able to trace pus from the labyrinth along the lymph sheaths of the auditory nerve to the meninges by way of the internal auditory canal. The semicircular canals were full of pus, the same having found its way into the vestibule through a perforation in the foramen rotundum.

This is an instructive case, and should make us bear in mind that we have not always got to the seat of the disease, apart from cerebral or cerebellar abscess, after the performance of the radical operation and opening up of the lateral sinus.

Otologists are now convinced, from the number of cases recently reported, that suppurative labyrinthitis, secondary to septic middle-ear disease, is of much more frequent occurrence than was formerly supposed to be the case. Either the round or oval window may be perforated, or a necrosis of the horizontal semicircular canal's bony wall may exist, and thus a propagation of infection from the middle ear to the labyrinth is possible, but the mode of origin of septic labyrinthitis in the greatest percentage of cases, according to statistics, is through direct communication between the middle ear and vestibule from perforation of the fenestrae rather than necrosis of the bony walls.