CLINICAL RECORD

CHOLESTEATOMA CAUSING CEREBELLAR ABSCESS

By Squadron Leader T. J. WILMOT (Ely)

THE following case of cerebellar abscess which developed while in hospital is thought worthy of publication.

An airman aged 18 was first seen on November 11th, 1948. He complained of increasing deafness and pain in the right ear. The latter had been present for seven days.

He had had some discharge for nine months which followed swimming. He denied any ear infection prior to this although as a child he had had a bead impacted in the right external meatus.

On examination his temperature was normal. The external auditory meatus of the right ear was infected; deep to this there was a large posterior marginal perforation with granulations and pulsating muco-purulent discharge. The fistula sign was negative and there was no mastoid tenderness.

In addition he had a chronic right-sided pansinusitis. He was admitted to the Royal Air Force Hospital, Ely, the same day and routine cleansing of his ear begun. The right antrum was washed out twice during the next three days and a large amount of mucopus returned on each occasion.

On November 17th he complained of right-sided headaches for the first time. There was slight mastoid tenderness and radiologically the appearance was that of a cholesteatoma. The mastoid air cells were sclerotic with a much enlarged mastoid antrum and considerable blurring of the few small peri-antral cells visible. He had no temperature.

In view of his tenderness and headache systemic penicillin 100,000 units 3 hourly was commenced. The headache persisted.

By November 20th he was obviously worse with increasing headache at the vertex and occipital regions. He held his head carefully but not inclined to either side. The aural discharge was more creamy in consistency although there was now little or no mastoid tenderness.

Neck rigidity was present and there was slight lateral nystagmus.

The following day (November 21st) definite papillœdema—more marked on the right—was present together with dysdiadokokinesia and hypotonia of right arm and leg. Fine movements of the right hand were much impaired and an intention tremor was present. Nystagmus was marked.

Mentally his condition had rapidly deteriorated during the past 24 hours. In view of the rapidity of the onset of his cerebellar symptoms I decided on immediate exploration of the cerebellum.

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In the operating theatre lumbar puncture was performed after an endotracheal tube had been passed.

Pressure	210 mm.
Protein	90 mg. per cent.
Cells	194 per c.mm.
Polys	60 per cent.
Lymphs	38 per cent.
Culture	Sterile.

Pandy's test for globulin slightly increased.

In view of the possibility of finding pus under tension in the mastoid, I decided to open the mastoid first and drain the cerebellum by this route rather than make the neurosurgical approach through a clean field.

The mastoid antrum was full of cholesteatomatous debris and pus under tension. A track of pus and granulation tissue led *viâ* Trautman's triangle to the dura of the posterior cranial fossa, which was thickened. A small incision was made and a fine exploratory needle inserted into the cerebellar cortex. At a depth of 1 cm. thin pus was found. A brain needle carrying a rubber tube was then inserted into the abscess and 7 to 10 c.c. of foul-smelling thin pus evacuated. This on culture later grew atypical coliform organisms. Through the tube calcium penicillin solution was inserted (7 c.c. of 10,000 units per c.c.).

The lateral sinus appeared thrombosed but in view of the time already taken, the illness of the patient and the fact that the cerebellar abscess had already been opened I decided not to interfere with this.

The drainage tube was left in the cerebellar abscess. The cavity was packed with B.I.P.P. gauze and left open.

Each day for the next five days the cavity was aspirated through the tube, the fluid being sent for culture and 5 c.c. of calcium penicillin solution inserted. All fluid aspirated remained sterile on culture.

On *November 26th* the pack was changed under general anæsthesia. The tube was removed, sterilized and re-inserted.

Within a few days it became increasingly difficult to insert more than 1 or 2 c.c. of penicillin into the abscess cavity, which appeared to be rapidly decreasing in size. I was unfortunately unable to obtain any thorotrast to insert into the cavity to obtain radiological confirmation of this fact.

On *November 28th* his general condition had so markedly improved that it was felt justifiable to reduce his penicillin injection from 3 hourly to 4 hourly intervals.

The following day I removed his tube. On *December 1st*—ten days after his operation—he still had a slight intention tremor and some blurring of the margins of the right disc. These physical signs had completely disappeared a few days later. His penicillin was discontinued at a total of 10·1 million units.

On *December 15th* I reopened the mastoid cavity and converted it into a radical with secondary suture of the skin.

He left hospital on *January 15th, 1949*, and has remained well. He has returned to his work as a garage mechanic and I last heard from him in May this year when he wrote to say that he was working very hard and quite symptom free.

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Summary

A case is described of a cerebellar abscess secondary to a cholesteatoma which recovered after surgical drainage through the infected area.

I would like to thank Sister C. B. Mathews of the P.M.R.A.F.N.S. for the way she contributed so largely to the successful outcome of this case.

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