Scalp Abscess

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ACUTE exacerbation of chronic mastoiditis is a frequent occurrence. However, scalp abscess as a complication of acute exacerbation of chronic otitis media is extremely rare. An interesting case of scalp abscess following acute exacerbation of chronic suppurative otitis media, due to the congenital anomaly of lateral sinus is presented with discussion.

Case Report

S.K., 16-year-old male, was referred to us from the Railway hospital with complaints of left ear discharge and deafness since childhood, otalgia, headache and attacks of fever with rigor up to 107° F especially in the afternoon associated with a progressively increasing swelling on the left side of the head for the last 7 days. He had been kept on broad spectrum antibiotics for the last 5 days; the temperature was controlled, but the swelling continued to increase in size.

Examination

General examination revealed a fully conscious, moderately built, anaemic patient with severe dehydration. Pulse 76, temp. 98° F. On local examination a huge tender hot, fluctant swelling over the scalp was noticed, more marked on the left side. No swelling or tenderness was found over the mastoid process on either side. The size of the head was almost double that of normal. A painful, firm lymph node was palpable in the upper deep cervical region on the left side. Otoscopy revealed small postero-superior perforation with cholesteatoma. Hearing test showed conductive deafness on left side. Right ear and fundus examination did not reveal any abnormality. Routine investigations were within normal limits. X-ray mastoids revealed small cholesteatoma cavity on left side.

Operation

Patient was operated through a postaural incision as an emergency under endotracheal general anaesthesia. Incision did not reveal any pus or tract when taken deep down to periosteum. Skin and subcutaneous tissue were markedly oedematous. Antrum was opened and was full of black cholesteatoma. Dural and sinus plates were intact and healthy. On extending the incision posteriorly and removing the sinus plate, coffee coloured, thick, foul-smelling pus was drained out. The sigmoid sinus was missing. The mastoid emissary vein was unusually large and thrombosed. The pus was coming out through the abnormally wide mastoid emissary foramen. The necrotic bone extending up

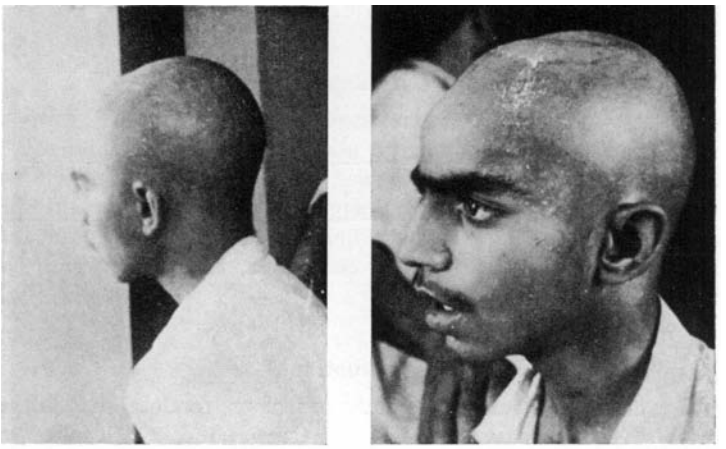
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to the occipital bone, was removed. The thrombosed mastoid emissary vein was communicating with very small venous sinus posteriorly. There were no granulations over the dura of the temporal or posterior cranial fossa. The mastoid wound was packed with medicated gauze and left open.

A cruciate incision was made in the occipital region to drain remaining pus and to provide another area for drainage. About 200 c.c. of pus drained out.

Post-Operative

Patient was kept on heavy dosage of crystalline penicillin and chloramphenicol. Soakage from occipital and mastoid wound was excessive for 3 days.



(*a*) (*b*)

FIG. 1.

Side and posterior aspect of head showing large swelling of scalp.

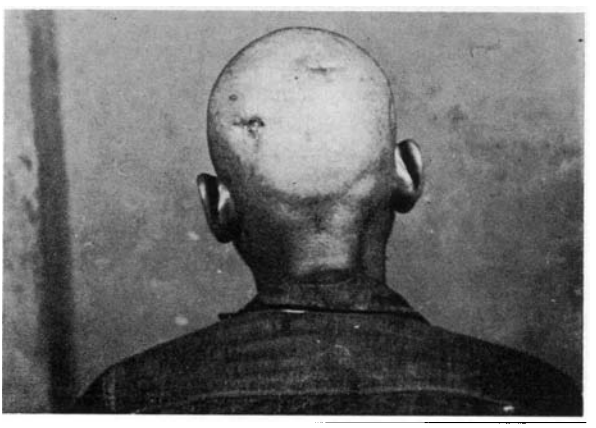


FIG. 2.

Showing post-operative view of the same patient with scalp scar.

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On fifth post-operative day a fluctuant swelling was noticed on right parietal region which was drained by another cruciate incision. Patient was discharged on 25th post-operative day. Follow-up of 6 months did not reveal any abnormality.

Discussion

The difficulty in diagnosis of this case as an otological complication of otitis media was due to the huge swelling of the scalp without any postaural swelling or mastoid tenderness. Moreover, ear signs were not acute probably due to masking effects of antibiotics. However, the case was thought to be one of the complications of otitis media due to history of otorrhoea, deafness of long duration, otalgia and fever with rigors of a short duration with radiological evidence of cholesteatoma on left side, which necessitated an immediate mastoid exploration. The intact sinus plate indicates a thrombophlebitic infection. On operation table we failed to demonstrate the presence of sigmoid sinus which was replaced by large mastoid emissary vein, which was in continuity with a small sinus posteriorly. The thrombophlebitis of mastoid emissary vein with intact sinus plate can be explained by the extension of the process through small diploic veins draining into it.

Gray (1958) has found communicating channels with the lateral sinus and pericranium by means of mastoid and condylar emissary veins. In our case sigmoid sinus was missing. Probably the infection to the scalp was directly through mastoid emissary vein.

This congenital anomaly of sigmoid sinus in our case can be explained on the finding of Williams (1930), "The descending portion of sigmoid sinus was absent and the lateral sinus reduced to the size of a thread. A large vein following the course of the superior petrosal sinus, left the skull by way of a foramen for emissary vein of mastoid process." In our case too, large mastoid foramen was found and it is quite likely that this abnormality was responsible for the unusual complication.

However, another possibility can be as described by Hoople (1936), "There was no trace of sigmoid sinus, the transverse sinus though smaller than usual was present as far as the "knee" where it divided into a lower branch which immediately left the emissary vein and an upper portion which presented a persistent petrosquamal suture and was joined to the superior petrosal sinus."

Summary

An unusual case of scalp abscess complicating chronic otitis media due to a congenital abnormality of sigmoid sinus is presented. The possible route of scalp infection is discussed.

Acknowledgment

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