



## POST AURICULAR BRANCHIAL CYST MASQUERADING DERMOID – RAREST OF THE RARE CASE REPORT

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<p><b>Article Info</b> Received 15/02/2015 Revised 27/03/2015 Accepted 29/04/2015</p> <p><b>Key words:</b> Post auricular swellings.</p>	<p><b>ABSTRACT</b> Post auricular swellings are not uncommon encounterances in surgical practice. Common differential diagnosis would include dermoid and lymph nodes. Branchial cyst are commonly encountered in upper 3<sup>rd</sup> of neck from second arch. Post auricular Branchial cyst has been reported only once from first arch [1] .This is the first, unique and rare case of post auricular presentation of branchial cyst from 2<sup>nd</sup> arch. To record, report and to add to the existing literature rare presentation of 2<sup>nd</sup> arch Branchial cyst behind the ear.</p>
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### CASE DETAILS

15yr old boy presented with a painless slowly growing tumour behind the left ear of 6yr duration. He didn't have H/o of any other swelling in neck. There was no H/o of ear discharge. Examination revealed a post auricular 3x2cm well circumscribed cystic lesion sitting over mastoid and below auricle. It was cystic,fluctuant and partially become less prominent on turning the head to opposite side.

Clinical appearance of swelling as shown (Fig a).

This swelling was brilliantly transilluminant (Fig b).

Radiograph of skull did not reveal any indentation (Fig c).

An MR scan showed hyper intense lesion on T2 and was a dumbbell shaped, a part superficial to upper Sternomastoid and another deep to Sternomastoid (Fig d). With a clinical differential diagnosis of post auricular dermoid or a lymphatic cyst, the child was subjected to surgical excision .The cyst appeared on table to be superficial to Sternomastoid (Fig f) and had an extension deep to Sternomastoid (Fig g).The deeper component was extending 1 to 1½ cm short of pharyngeal wall.Cyst was excised in TOTO.Gross morphology showed multi-septate thick walled cystic lesion (Fig h).Microscopy of content confirmed cholestral crystal(Fig j) The wall of the cyst was

lined cuboidal columnar epithelium confirming Branchial cyst (Fig i).

### DISCUSSION

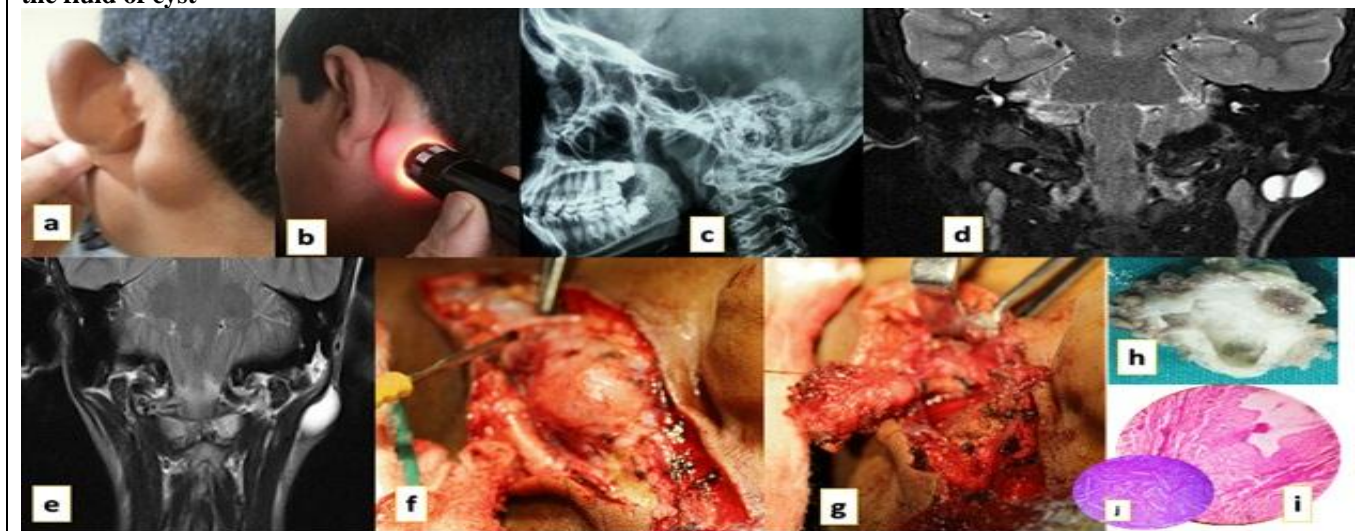
Post auricular swellings are commonly due to a) lymph node following ear infection,trauma or inflammatory origin [2] b) Dermoid cyst [3] c)Sebaceous cyst or an Abscess [4] . The index case showed a cystic , fluctuant swelling in the post auricular region. Dermoid cyst are rarely fluctuant, non transilluminant and show a sign of indentation [5].Lymph nodes are usually classically multiple and in groups, Sebaceous cyst containing pultaceous material but non Transilluminant and abscess containing pus. Second arch Branchial cysts are usually described in upper 3<sup>rd</sup> of neck, anterior to Sternomastoid and rarely are subcutaneous [6]. But in this case the cyst was posterior and anterior to Sternomastoid and very close to pharyngeal wall. Branchial cyst has been classified into 4 types [7].The index case was presenting behind the ear with a subcutaneous and a deep Sub-Sternomastoid component. Brilliant transilluminance although suggested lymph cyst or Branchial cyst,the rarity of branchial cyst presenting behind the ear was the reason of not topping the differential diagnosis. Subcutaneous component goes



against the diagnosis of Branchial cyst. Lymph cyst on the other hand shows septations, sometimes may be extracapsular if malignant, lacks cholesterol crystal and are mostly lined by stratified squamous epithelium [8]. The

histopathology with classical cholesterol crystal in the content and the cuboidal columnar lining confirm Branchial cyst. Post op period was uneventful.

**Figure 1. a. Clinical picture mimicking post auricular dermoid. b. Brilliant trans-illumination. c. Plain radiograph skull with no evidence of erosion of bone. d. MR Coronal showing the dumbbell shaped cysts. e. MR Showing superficial component. f. Operative picture showing relation to SM muscle. g. Deeper component. h. Excised specimen with thick walls and septations. i. Histology showing squamo columnar epithelium. j. Cholesterol crustals in the fluid of cyst**



## CONCLUSION

First Unique, rare second arch branchial cyst with post auricular presentation simulating post auricular dermoid is being reported.

## REFERENCES

1. M.A.Siddiq. (2003). First Branchial cleft anomaly presenting as a recurrent post auricular abscess. *Emerg med J*, 20, 103-104.
2. Karpf, M. Lymphadenopathy. In: Walker HK, Hall WD, Hurst JW editors. (1990). *Clinical methods: the history, physical and Laboratory examination*. 3<sup>rd</sup> edition, Boston, Butterworths, Chapter 149.
3. S Pankaj, S Shalini. (2007). Post auricular dermoid cyst: A case report with review of literature. *J Plast Surg*. 4(1).
4. Steven J.Reynolds, Marcel Behr, Jane McDonald. (2001). Turicella Otitidis as an unusual agent causing a post auricular abscess. *J Clin Microbiol*. 39(4), 1672-1673.
5. S. Das. (2013). A manual on clinical surgery, 10th Ed, kolkata: Dr S. Das pub. 42-43.
6. M.Valentino, C.Quiligotti, L.Carone. (2013). Branchial cleft cyst: *J Ultrasound*. 16(1), 17-20.
7. Mamatha Boringi, Sharath Chandra Bontha, Milanjeet kaur, Arshia Shireen. (2014). Branchial cleft cyst: A case report with review of literature. *J Orofac Sci*, 6(2), 125-128.
8. Surinder N.Bhaskar, Joseph L.Bernier. (1959). Histogenesis of Branchial cyst: A report of 468 cases. *Am J Pathol*, 35(2), 407-443.