OccultNeoplasm(MucoepidermoidCarcinoma)inaParotidCyst

ABSTRACT

Aparotidcystisawell-documentedclinicalentity.Herewereporta case of low-grade mucoepidermoid carcinoma as an occultneoplasm;ararepresentationofaparotidcystina35-year-oldfemale patient who presented with well-defined small cysticswelling of right parotid gland; cytologically consistent with asimpleparotidglandcyst.Thepurposeofthisarticleistocreateawareness about existence of an occult neoplasm (low-grademucoepidermoid carcinoma in this case) in a small simpleparotid cyst in a young female an unusual presentation andmanagementofparotidcyst.

Keywords: Parotid cyst, Low-grade mucoepidermoidcarcinoma,Occultneoplasm

Introduction

Mucoepidermoid Carcinoma (MEC) is the most common malignant salivary gland tumor accounting for 10–15% of all salivary gland neoplasms and 30% of all salivary malignancies followed by adenoid cystic carcinoma (ACC) [5]. Malignant salivary gland tumors are rare neoplasms that are vastly heterogenous in their histological patterns and clinical behaviors. As a consequence, studies have lacked the robust sample sizes needed to define treatment strategies. Recognized protocols, or lack thereof, have complicated the analysis of salivary gland tumors across institutions. Existing literature has agreed upon how to manage clinically positive nodal disease; primarily surgical treatment including selective neck dissection with potential for postoperative radiation [6].

CASEREPORT

A35-year-oldfemalepatientcamewiththechiefcomplaint of swelling over the right parotid region since 3 months,painless,progressivelyincreasinginsize;initiallyfromsizeofpeatothatofwalnut.Therewasnohistoryofincreasein size of swelling or pain while eating. There was no historysuggestive ofanyinflammatory orgranulomatoussialoadenitis.Therewasnomajormedicalsurgicalillnessinthepast.

Onexamination,therewasasinglewell-defined,globular swelling of size 2 × 2 cm situated just anterior to the righttragus; in the region of right parotid gland. Surface of theswelling wasnotbosselated, without anysigns ofinflammation.Onpalpation,theswellingwasnontender,softtofirminconsistency,cystic,freelymobile,neitheradheredtoth eunderlyingtissuenortotheoverlyingskin.Temperatureof the skin overlying swelling was not raised. Facial nerveexaminationwasnormal.Intraoralexaminationdidnotrevealanyabnormality.

Patientwasinvestigatedsubsequently.SeropositivityforHIVwasruledout.Ultrasonographyrevealed1.9×1.6cmsizedhyperechoic,inhomogeneous,cysticlesioninvolving superficial lobe of the right parotid with few intraparotidlymphnodes,suggestiveofaparotidcyst.Computertomography (CT scan) of neck revealed a solitary well-defined lesion measuring 1.9 × 1.7 × 1.9 cm in size in theregionofsuperficiallobeofparotidglandintheclose

Comment [A1]: Case report, must be included in the title

Comment [A2]: What were the main therapeutic interventions and results? What are the main lessons to be drawn from the case?

Comment [A3]: Confirm its inclusion in the NLM health sciences descriptors

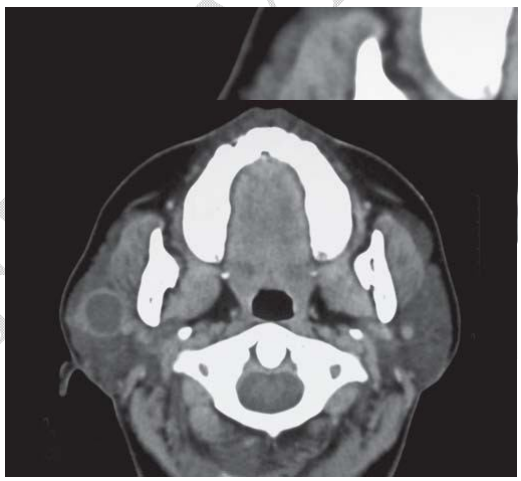
Comment [A4]: Add more patient demographic characteristics

proximitytotherightmassetermuscle;nonenhancingcenterwith smooth peripherally enhancing walls (Figs 1 and 2).Cytological study showed cholesterol crystals and foamymacrophages.Fewepithelialcellswereseeningroupsandsheets. This was consistent with a simple salivary glandcyst(Figs3and4).

Patient was worked up for superficial parotidectomy.Complete surgical excision of superficial lobe of parotidalongwiththecystcontainedinitwascarriedout.Thefacial nerve was identified and preserved. The specimen wassubjected to histopathological study (Fig. 5). It revealed aunilocularparotidcystandthepresenceoflow-grade

Fig. 1: CT scan of head and neck showing right parotid cyst,nonenhancingcenterwithsmoothperipheralenhancementofwallsonnonioniccontrast,slicethickness5mm

Fig. 2: CT scan of head and neck showing right parotid cyst insuperficial lobe of right parotid gland, nonenhancing center withsmoothperipheralenhancementofwallsonnonioniccontrast,slicethickness5mm



Comment [A5]: Add medical, family, psychosocial history, diet, lifestyle, relevant genetic information, previous interventions and outcomes

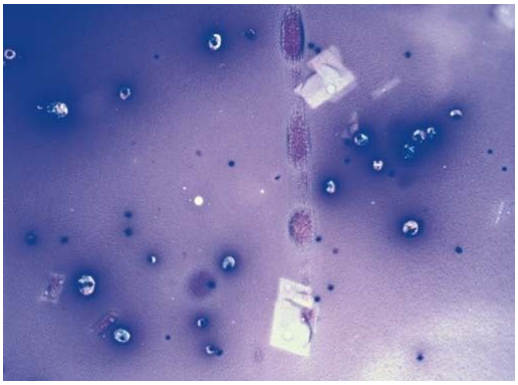


Fig. 3: FNAC smear from right parotid gland showing cholesterolcrystalsandfoamymacrophagesfewepithelialcellssuggestiveofasimpleparotidcyst(Gimsastaining,10×)

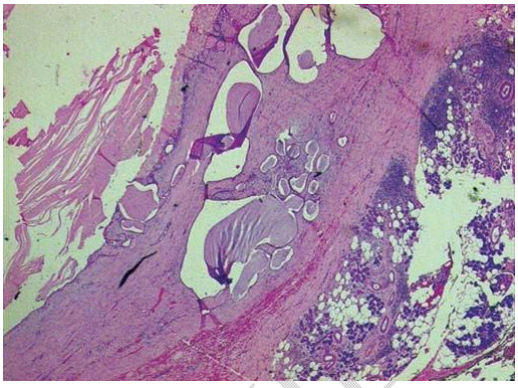


Fig. 6: Photomicrograph of a parotid cyst(H&Estaining,magnification10×)

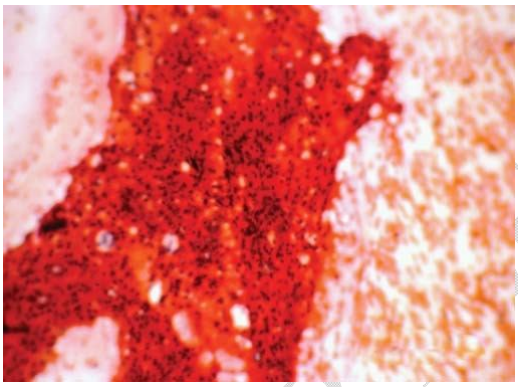


Fig. 4: FNAC smear from right parotid gland showing cholesterolcrystalsandfoamymacrophagesfewepithelialcellsingroupsandclusters suggestive of a simple parotid cyst (Papanicolaou stain,magnification40×)

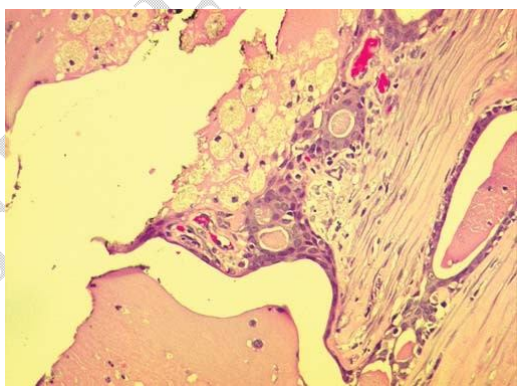


Fig. 7: Photomicrograph of parotidshowing low-grademucoepidermoidcarcinoma(H&Estaining,magnification40×)

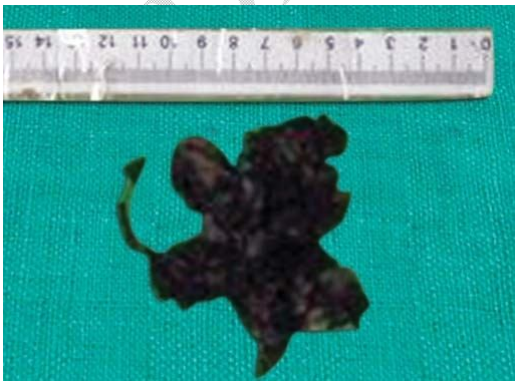


Fig.5: Superficialparotidectomyspecimen(gross)

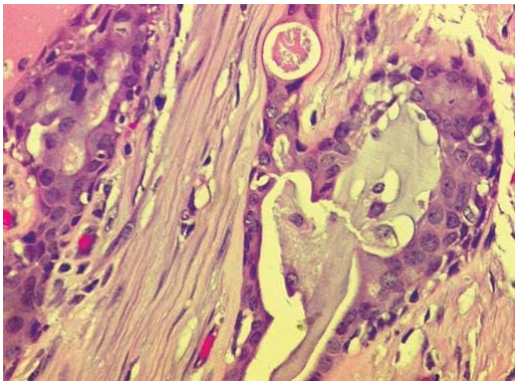


Fig.8: Photomicrographofparotidshowinglow-grademucoepidermoidcarcinoma[(H&E)staining,magnification100×]

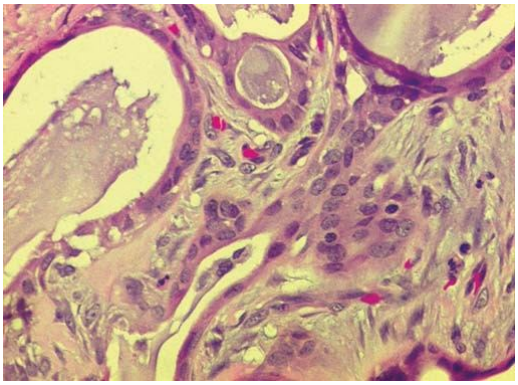


Fig. 9: Photomicrograph of parotid showing low-grademucoepidermoidcarcinoma[(H&E)staining,magnification100×]

mucoepidermoidcarcinomameasuring1cmdiameter(Figs 6to9).

DISCUSSION

Simple(retention)cystswithintheparotidtissuearerare[1-4]and one should suspect *Echinococcus* or a hydatid cyst orhumanimmunodeficiencyvirus(HIV)–relatedcysts.Themostcommon cystic lesion is a Warthin's tumor and areas ofpleomorphic adenoma may also be cystic.[1] Branchial cystscanoccurwithinthelymphnodesintheglandonthesurfaceof gland. Lipomas can feel cystic. They usually lie lateralto the parotid gland but can extend anteriorly into the anteriorcompartmentofface.[1]Theymustbedifferentiatedfrom fattyinfiltration, which is usually bilateral. Benign lympho-epithelial lesion was described in 1952 by Godwin.[1] It is apathologicalprocessthatarisesintheintralobularductslikea punctuate parotitis. As the ducts dilate, their cells disruptandepidermoid metaplasia begins. Lymphocytesaggregatedaroundtheductsandthelumenbecomesobliterated.Itisprobablypartofalymphoreticularprolife-rativedisease.[1]Itisnotyetclearwhetherabenignlympho-epithelial lesion evolves into malignancy or whether it is apart of an immunological disorder that is going to becomelymphoproliferativediseaseanyway.[1,4]

Inthepresentcasereport,mucoepidermoidcarcinoma causedsignificantobstructionofparotidductthereby givenrise toasimpleretentioncystofparotid.Existenceofsuchpatholog y associated with a parotid cyst is a very rarelydescribed entity in a literature; this is probably a secondcaseinliterature.[2]Followingsuperficialparotidectomythepatienthaduneventfulrecoveryandtherewasnorecurrenceon2yearsfollow-up.

CONCLUSION

Parotid cyst can be a presenting symptom in patients withoccult carcinoma parotid.[2-4] Hence, treatment of a simpleparotid cyst should be facial nerve preserving superficialparotidectomywithmeticulous,histologyandcare fulfollow-up.

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Comment [A6]: Justification of the conclusions?

Comment [A9]: It must include a greater number of references, updated and appropriate to the format that corresponds to each source.

Comment [A7]: Were there problems with the diagnosis?
How was the diagnostic reasoning, prognostic characteristics?
Was there pharmacological intervention, preventive intervention, self-care, changes in the intervention with justification?
Was there compliance with the interventions and tolerability to them? How was it evaluated?
Did any adverse and unforeseen events arise?

Comment [A8]: What are the strengths and limitations in case management?
What are the main lessons that can be extracted from the case?

Did the patient communicate his or her perspective or experience?
Did you give your informed consent?