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Rare Association Of Goblet Celladenocarcinoma Appendix With Low Gradeappendicealmucinousneoplasm:A case report

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ABSTRACT
Goblet cell adenocarcinoma is a rare malignant tumour of the appendixoftenmasqueradingasappendicitis.Althoughitisdescribedasanamphicrinetumourcomposedofgoblet-likemucinouscellsandvariablenumberofendocrinecellsandPanethcells,varioustheoriesexistregardingthehistopathogenesisofthistumour[1].Occurrenceofgobletcell adenocarcinoma with associated mucinous appendiceal neoplasmsisveryrare.Wereportonesuchcaseofa64yearsoldmanwhopresentedtoourhospital.

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I. INTRODUCTION

Gobletcelladenocarcinomaisanuncommonmalignantneoplasmoftheappendixwhichoftenmimicsappendicitisclinically.Currently,itisdescribed as an amphicrine tumour composed of goblet-like mucinouscellsandvariablenumberofendocrinecellsandPanethcells.Thehistogenesis of this neoplasm is questionable as there has been somecases of goblet cell adenocarcinoma occurring in association with otherbenignmucinousneoplasmsofappendix.Toourknowledge,thereare6reportedcasesofgobletcelladenocarcinomawithassociatedappendicealmucinousneoplasms.Wereportonesuchcaseofa64yearsoldmanwhopresented toourhospital.

II. CASE REPORT

A 64 year old male patient presented to our hospital with the complaintofrightsidedpainabdomensince6months.Nootherpresentingillness.Hehadapasthistoryofacuteappendicitisforwhichconservativemanagementwasdone.

Onper-abdomenexamination,therewasnotendernessororganomegaly.HisUSGabdomenandplainandcontrastenhancedCTscanweresuggestiveofacuteappendicitis(Fig.1a).

Appendicectomywasdone.

Wereceivedhisappendixwhichmeasured6cmlengthand2cmmaximumdiameter.Surfacewascongested.Cut sectionshowedthickened mucosa and a mucinous appearance involving the entire cutsection.

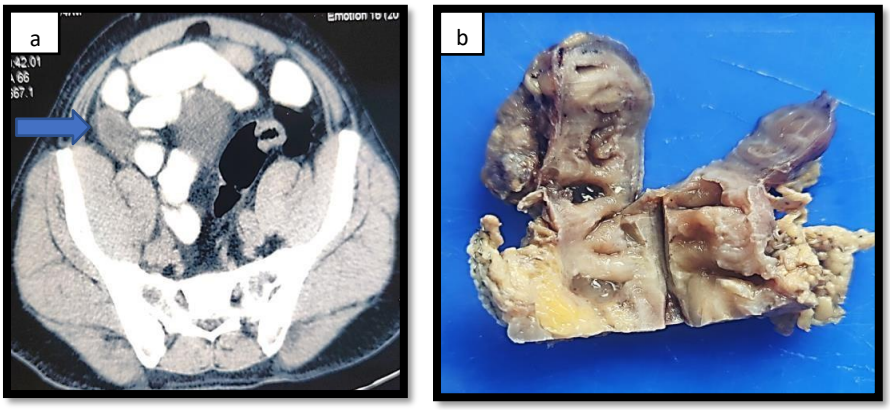

Fig.1a. Dilated and fluid filled appendix with periappendiceal fat stranding and minimal free fluid in theright iliac fossa – suggestive of appendicitis.Fig.1b. Cut section of appendix showing mucosal

thickeningandamucinousappearance.

Microscopy showed tubules and nests of goblet-like cells invading themuscularispropria,somewithendocrinecells.Extracellularmucinpresent. Base of appendix showed Low grade appendiceal mucinousneoplasm.
Immunohistochemistry with Synaptophysin showed focal positivity inthenestsofgoblet-likecells.

Fig.2a. Base of appendix showing low grade appendiceal mucinous neoplasm. Fig.2b. 10X- Tubules andnestsofgoblet-likecellsinvadingthemuscularispropria

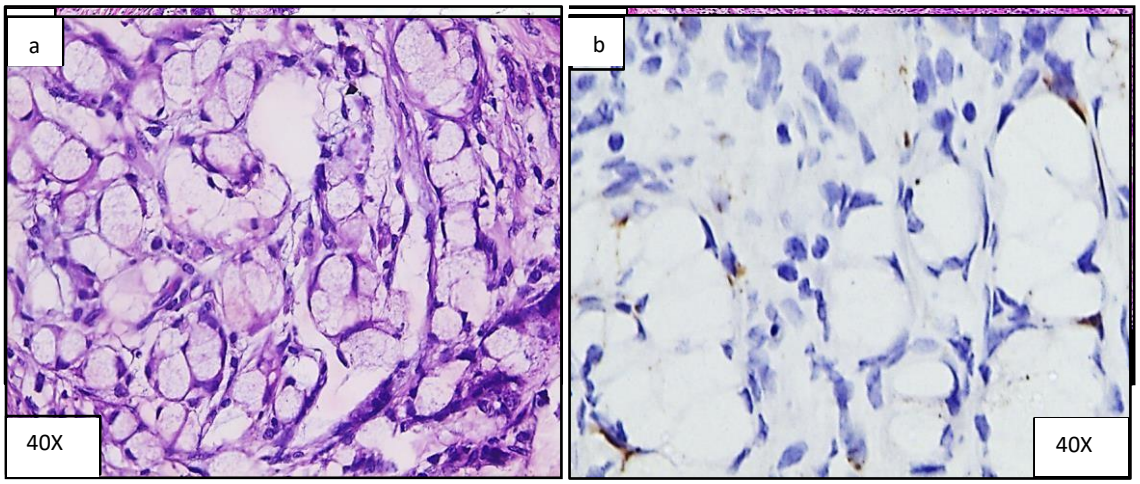

Fig.2c.Nestsofgoblet-likecells–40X.Fig.2d.Synaptophysinfocallypositive.

ThefinaldiagnosiswasGobletcelladenocarcinomaAppendix,LowgradewithbaseofappendixshowingLow GradeAppendicealMucinousNeoplasm(LAMN).
The patient was followed up. Right hemicolectomy was done 2 monthslater. We received the specimen in our department. No residual tumourwasfoundonmicroscopy.

III. DISCUSSION

Goblet cell adenocarcinoma of appendix coexisting with appendicealmucinous neoplasms are rare occurances. This correlation supports theunitarystemcellconcept,whichcontendsthatgobletcelladenocarcinomasdevelopfromasinglepleuripotentintestinalstemcellthatcandifferentiateintoneuroendocrineandmucin-producingcells[2].However, it is still debatable because this link can also be seen as anadenoma-carcinomasequence,whichisalsocommonlyacknowledged[3].Morecaseshavetobereportedtoruleoutthepossibilityofa coincidentialassociation.

Oncediagnosed,thepatienthastoassessedforriskofperitonealdiseaseand Right hemicolectomy with or without Cytoreductive surgery andHyperthermicintraperitonealchemotherapytobegivenaccordingly[4].

IV. CONCLUSION

Ours is a case of a 64 years old man with a clinical and radiologicaldiagnosisofappendicitisforwhichappendicectomywasdone.Microscopic examination of the specimen lead to the final diagnosis ofGoblet cell adenocarcinoma, appendix with base of appendix showingLow grade Appendiceal Mucinous Neoplasm which is a rare association.Ourcasereportissignificantasthisassociationquestionsthehistopathogenesisofgobletcelladenocarcinoma.

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