CASE REPORT

CUTANEOUS BRONCHOGENIC CYST: A RARE PRESENTATION AS ANTERIOR CHEST WALL CYSTIC MASS

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SUMMARY

Bronchogenic cysts are uncommon and occur along the trachea-bronchial tree, lungs and mediastinum and even more uncommon in the skin tracheo-bronchial tree especially the anterior chest wall. It is a congenital abnormality that arises as a result of abnormal budding along the foregut in early embryogenesis. The diagnosis is usually missed clinically and majority of the cases are histologically diagnosed. The diagnosis in our case was histologically made and revealed a fibromuscular cyst wall lined by pseudostratified ciliated columnar epithelium with few goblet cells and sub-epithelial mucinous glands. We report a case of cutaneous bronchogenic cyst that occurred in the skin of the anterior chest wall over the manibrium sterni.

KEYWORDS : Chest wall, Bronchogenic cyst, skin

INTRODUCTION

Bronchogenic cysts are rare developmental abnormalities of the foregut usually seen in children but could be carried to adulthood. They are usually along the trachea-bronchial tree when abnormal budding occurs early in developmental age and more peripherally when budding occurs later[1, 2, 3]. The lesions are usually solitary and cervical presentation is mostly seen in paediatric age group[4]. Subcutaneous presentation is rare and even rarer is anterior chest wall presentation. Other unusual sites of presentation include the pericardium, sternum, scalp, scapular and retroperitonium[4, 5, 6].

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Many of the cases are asymptomatic and are only discovered incidentally[1]. Rarity of anterior chest wall presentation prompted the report of this case.

CASE REPORT

We present a 7-year old Nigerian girl who presented with an anterior chest wall swelling over the manubrium sterni noticed since birth. The swelling has been gradually increasing in size since then. It was asymptomatic and there were no other swellings or congenital abnormalities. On examination the swelling was spherical and cystic measuring about 5 x 4cm. It was non-tender and slightly mobile. There was no skin discolouration over the swelling and no punctum was seen. All other examinations did not reveal any abnormality. Her baseline haematological and biochemical parameters were all within normal limits. A clinical assessment of dermoid cyst was made. The swelling was excised under local anaesthesia and there were no postoperative complications. The patient was discharged from the surgical clinic after uneventful follow-up for months. The macroscopic examination of the swelling in pathology revealed a unilocular cyst with slimy contents

and wrinkled inner lining. Histology shows a fibromuscular cyst wall lined by pseudostratified cuboidal to columnar ciliated epithelium with occasional goblet cells. There are areas of folding and other parts of the cyst wall show benign sub-epithelial mucinous glands and fibrous tissue (Fig 1 & 2). These features are consistent with a diagnosis of a bronchogenic cyst.

DISCUSSION

Cutaneous bronchogenic cysts are uncommon with prevalence of 1:4200 to 1:6800 and male to female ratio of 4:1[5]. The usual presentation is congenital asymptomatic nodule seen after birth or in early childhood.[4,5]. In the case of our patient, the lesion was noticed after birth with progressive increase in size without symptoms. Most cases of bronchogenic cysts are said to be asymptomatic but a study showed symptomatology in 25 of 31 cases studied. The symptoms were found more in adults than children.[1] Such symptomatology and associated complication prompted the authors to suggest surgical removal of all suspected bronchogenic cysts early in their development before they become large enough to present with symptoms and pose surgical complications[1].

Generally cutaneous bronchogenic cysts are more commonly located in the suprasternal notch[4], followed by presternal area, neck and in the scapular.[7] There were case reports of unusual location like the abdominal wall, chin and cutaneous tissue[8]. Our case belongs to these rare presentations. Most of these bronchogenic cysts are thought to derive from error in the developing lung buds during the period of intrauterine life[9]. Some of these intrathoracic cysts can undergo anterior migration thus giving rise to cutaneous bronchogenic cysts in the anterior chest wall as might be the case in our patient.

The clinical diagnosis of cutaneous bronchogenic cysts is generally poorly made by the surgeons hence the need to resort to histopathologic diagnosis of most cases. The poor recognition of these cysts is because there are no morphologic pathognomonic features that can distinguish them from branchial cysts, thyroglossal duct cysts, dermoid cysts, infundibular cysts and trichilemmal cysts. In addition, the extreme rarity of the disease in the absence of high index of suspicion makes clinical diagnosis difficult. branchial cysts usually occur in the pre-auricular area, mandibular region or along the sternocleidomastoid muscle and the cysts are lined by stratified squamous epithelium or pseudostratified columnar epithelium.

Thyroglossal duct cysts on the other hand are usually located along the midline and characterized by the presence of thyroid follicles composed of cuboidal cells surrounding colloid material and lymphocytic aggregates histologically.

Trichilemmal cysts which are derived from the root of hair shaft are lined by stratified squamous epithelium and the lumen filled with keratin. These histologic features can easily be distinguished from cases of bronchogenic cysts which are lined by ciliated pseudostratified columnar epithelium interspersed by goblet cells Cartilage and smooth muscle could be present as well.

There have been reported cases of rare malignant transformation of bronchogenic cysts hence the need for correct diagnosis and ensuring complete surgical resection. This transformation may be in the form of mucoepidermoid carcinoma[6] or melanoma[7]. ■

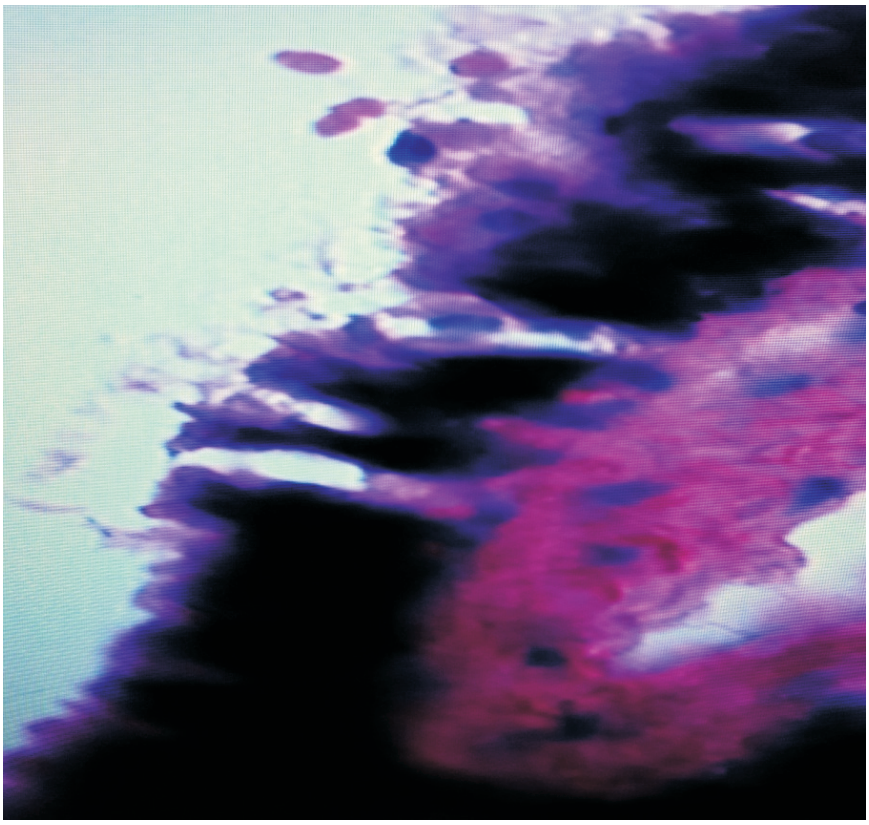

Figure 1. Cyst wall lined by respiratory type mucosa

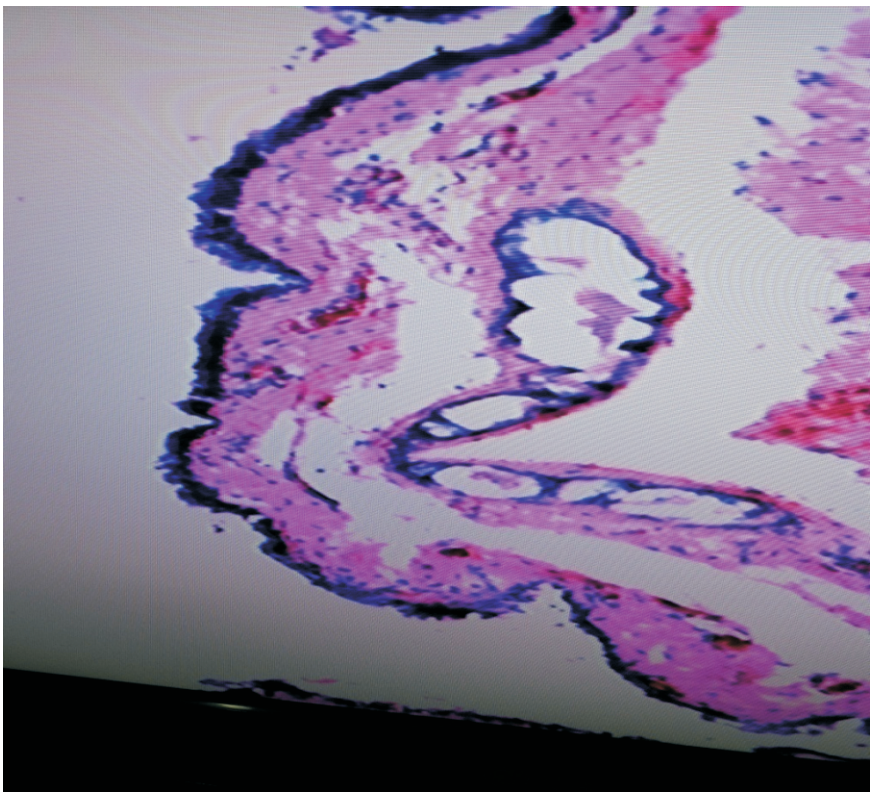

Figure 2. Fibromuscular cyst wall lined by respiratory type mucosa and sub-mucosal mucinous glands

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