A retroperitoneal bronchogenic cyst: a rare cause of a mass in the adrenal region

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Abstract
This report documents a bronchogenic cyst presenting as an adrenal tumour in a 51 year old man with persistent epigastric pain. The cyst is regarded as a developmental abnormality of the primitive foregut, which typically occurs in the chest. Subdiaphragmatic, and retroperitoneal locations in particular, are unusual. The differential diagnosis of a bronchogenic cyst in the retroperitoneum includes cystic teratoma, bronchopulmonary sequestration, cysts of urothelial and mullerian origin, and other foregut cysts. (J Clin Pathol 2001;54:801–802)

Keywords: bronchogenic cyst; retroperitoneum; adrenal; differential diagnosis

Primary retroperitoneal cysts are rare. Most originate from vestiges of embryonic blastemas. Their inner lining is usually compatible with either a mesothelial or mesonephric origin, although in some instances the lining is of mullerian type, with either a serous or mucinous appearance.

Bronchogenic cysts are developmental abnormalities of the primitive foregut that are usually found above the diaphragm, especially in the mediastinum and particularly posterior to the carina. Rarely, they can occur in a subdiaphragmatic location, and a retroperitoneal position is distinctly unusual. To the best of our knowledge, there have been only 21 cases reported in the world literature, 15 of which have been in the English language. We report an isolated bronchogenic cyst in a 51 year old man that presented as an adrenal mass.

Case report
A 51 year old white male patient, in whom a left hemicolecctomy had been performed in December 1999 for a benign sigmoid colonic stricture secondary to complicated diverticular disease, presented approximately one month later with continuing epigastric pain, which he had been suffering from for the past 18 months. He had a past medical history of hypertension and reflux oesophagitis.

A computed tomogram (CT) of the abdomen was carried out, and showed a very well defined and circumscribed 5 cm solid mass in the left suprarenal region, displacing and compressing the left adrenal gland laterally (fig 1).

Histopathology
Gross examination of the specimen showed a collapsed, previously opened, dark grey to brown cyst measuring 40 × 35 mm, with a maximum wall thickness of 3 mm. The inner lining was mostly smooth. The outer surface of the cyst showed an attached, partly fragmented and compressed, adrenal gland measuring 30 × 25 × 3 mm, with adjacent small amounts of fat tissue. The entire cyst was sectioned and submitted for microscopic examination.

Histologically, the cyst was found to be lined by respiratory-type, pseudostratified, ciliated columnar epithelium, resting on fibrous connective tissue focally containing seromucous glands and nodules of hyaline cartilages, fulfilling the histological criteria of a bronchogenic cyst (fig 2). There was no cytological atypia in the lining epithelium or stromal tissue components. Neither pulmonary parenchyma nor teratomatous

Figure 1 Computed tomographic scan showing a 5 cm solid mass in the left suprarenal region (arrow) compressing the adrenal gland laterally.
Short report

Summarily by migration. A retroperitoneal loca-
cyst may occur in other unusual locations, pre-
olution is exceptionally unusual. Although the
bronchogenic cysts are thought to be foregut
Bronchogenic cysts are classified as foregut
discussion

Bronchogenic cysts are thought to be foregut
malformations. They arise from an abnormal
budding of the tracheobronchial anlage of the
primitive foregut during the 3rd to 7th weeks of
gestational life, the thoracic and abdominal cavities
are linked via the pericardio–peritoneal canal.
When the canal is later divided by fusion of the
are classified as oesophageal cysts; and those
those containing cartilage or seromucous
glands are classified as bronchogenic cysts, as
in our case; those containing two well devel-
oped layers of smooth muscle without cartilage
are classified as oesophageal cysts; and those
with none of these distinguishing features are
classified as foregut cysts of gastric, enteric, or
combined gastroenteric types.

The treatment of retroperitoneal broncho-
genic cyst is surgical removal. Although most
are asymptomatic, excision is recommended to
establish diagnosis, alleviate any symptoms,
and prevent complications, especially infec-
tions and the remote but documented risk of
malignant transformation.

This unusual case supports the previously
published reports of retroperitoneal broncho-
genic cysts, and further emphasises the dif-
culty of preoperative diagnosis, because CT
images may suggest the presence of a solid
mass, probably because the cyst contains thick
proteinaceous secretions.

In summary, although bronchogenic cysts
are rare, they should be considered in the
differential diagnosis of a retroperitoneal mass,
particularly a cystic tumour in the region of the
left adrenal gland.