Diagnosis of metastatic lung cancer from a colonic polyp: case report of a rare histological diagnosis

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Lung cancer is the leading cause of cancer-related death in New Zealand, followed by colorectal cancer.1,2 Common sites of metastases for lung cancer include the brain, bone, liver, adrenal glands, contralateral lung and distant lymph nodes.3 Here, we present a rare case of non-small cell lung cancer metastasis found incidentally in a colonic polyp.

Case report

An 80-year-old female was referred to the General Surgery Department for investigation of rectal bleeding. Two years prior, she had had a high anterior resection for pT2N0 sigmoid adenocarcinoma. She had recently commenced Dabigatran for newly diagnosed atrial fibrillation. She was also an ex-smoker, with a 40-pack-year history.

Diagnostic colonoscopy revealed an intact healthy appearing end-to-end colo-colonic anastomosis, with three 5mm polyps, as well as one 10mm polyp (Figure 1) at the hepatic flexure.

Histological examination after excision of the largest polyp revealed poorly differentiated non-small cell carcinoma (Figure 2).

The immunohistochemistry profile was not in keeping with a primary colorectal tumour, instead favouring a metastasis. The cells were positive for CK7, CK20 (patchy and weak), GATA3 (weak) and broad-spectrum cytokeratin, while negative for CDX2, CEA, SOX10, ...
LCA/CD45, calretinin, BerEP4, oestrogen receptor, GCDFP15, progesterone receptor, p40, TTF1 and PAX8 (Figures 3 and 4).

The patient underwent cross-sectional chest imaging which showed a 13mm left upper lobe nodule (Figure 5).

This was radiologically suspicious for a primary adenocarcinoma pulmonary malignancy, and the patient was subsequently referred to the Medical Oncology service.

**Discussion**

Metastatic disease to the colon from an extra-colonic primary malignancy is very rare. This is reflected by the limited number of reported cases. In a large multi-centre European study that examined 10,365 colorectal malignant tumour patients, only 35 (0.34%) were found to have metastasis to the colon from an extra-colonic primary tumour. The most common primary site was breast with 17 cases. Most cases are asymptomatic; however, can present drastically as severe anaemia or bowel perforation.5–7

Primary lung adenocarcinoma metastasis to the colon is exceedingly rare. Pulmonary metastases to the small intestine are more common than to the stomach or colon.9 Most cases of primary lung cancer that metastatised to the gastrointestinal tract were squamous cell carcinoma and large cell carcinoma, not adenocarcinoma.9 The exact incidence of adenocarcinoma metastases to the colon is unknown. Most publications found in the literature were isolated case reports with a known pulmonary malignancy background, which further highlights the rarity of this clinical finding of a lung cancer initially manifesting as GI-tract involvement.10,11

Adenocarcinoma of the lung presenting as metastatic colonic polyp has not been reported in New Zealand before.
Figure 3 and 4: Immunohistochemical stain showing strong CK7 and patchy very weak CK20 staining.
Figure 5: Transverse and sagittal CT images of the left upper lobe nodule.

Competing interests:
Nil.

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