

Asymptomatic Giant Cell Lung Carcinoma Presenting As A Small Bowel Intussusception

A Sheikh, R Kumran, C Hall

Citation

A Sheikh, R Kumran, C Hall. *Asymptomatic Giant Cell Lung Carcinoma Presenting As A Small Bowel Intussusception*. The Internet Journal of Surgery. 2005 Volume 7 Number 2.

Abstract

Metastasis to the small bowel from lung carcinoma is extremely rare and tends to be asymptomatic, being determined mainly on postmortem examinations. We present an unusual case of a patient in whom small bowel intussusception was the presenting feature of an underlying asymptomatic giant cell lung carcinoma. This patient underwent two resections and the histology on both occasions was inconclusive suggesting either a primary pleomorphic giant cell carcinoma of the small bowel, or a metastatic deposit from an unknown primary. All her basic investigations including a chest x-ray were normal however respiratory distress prompted a CT chest which revealed the primary lesion. The rate of metastases to the small bowel from lung carcinoma is between 4.6-14%, however a majority of patients are asymptomatic and die prior to being diagnosed.

INTRODUCTION

Primary malignant small bowel tumours are rare and account for about 1-5% of all gastrointestinal neoplasms, with adenocarcinomas being the most common followed by carcinoid tumors (1). These tumors usually present late, with features of local invasion and distant metastasis. Small bowel is not a common site for metastases however tumors of varying origins have been reported to metastasize to this site. These include renal cell carcinomas, osteosarcomas, laryngeal carcinomas, prostatic carcinomas, breast carcinoma, salivary gland tumors, malignant melanomas, and lung carcinomas (2,3,4,5,6,7,8). Secondaries to the small bowel usually present with signs and symptoms of obstruction and perforation, but sometimes can also present with anemia and melaena (2,3,4,5,6).

It is well established that lung carcinoma metastasizes to the small bowel (2,3,4,5,6,7,8), however these tend to be asymptomatic and are determined on postmortem examination (2,4,8). Symptomatic small bowel metastases from lung carcinomas thought to be rare has been reported in the literature (2,3,5,6,7). Of those cases which have been reported, a majority have been subsequent to the primary diagnosis having already been established. We present an unusual case of a patient in whom small bowel intussusception was the presenting feature of an underlying giant cell lung carcinoma.

CASE REPORT

A forty seven year old Caucasian woman presented as an emergency with vomiting and abdominal pain. After preliminary investigations, a diagnosis of small bowel obstruction was made and she underwent an emergency laparotomy. Operative findings were those of an intussusception caused by a polypoidal lesion in the jejunum and a further four similar lesions scattered in the jejunum. All lesions were removed by resection of the small bowel. The remainder of the laparotomy was normal and she made an uneventful postoperative recovery. Histopathology, including H&E staining and immunohistochemistry suggested the possibility of either a primary pleomorphic giant cell carcinoma of the small bowel, or a metastatic deposit from an unknown primary.

Subsequent post operative investigations included a chest x-ray, CT scans of the abdomen and pelvis, and colonoscopy, which revealed no significant abnormality. However, a small bowel contrast study six weeks after her laparotomy revealed a future four similar polypoidal lesions in her small bowel. Another emergency laparotomy was performed and she underwent a fairly extensive small bowel resection to remove these lesions. Postoperatively, she developed respiratory distress and required ventilation. Suspecting a pulmonary embolism, a CT pulmonary angiogram was performed, which revealed a bronchial mass whose histology was the same as the small bowel lesions. The patient could

not be extubated due to her respiratory condition and she died about 24 hours after her second laparotomy.

DISCUSSION

The presentation of lung cancers is non specific, usually with pulmonary signs and symptoms, paraneoplastic syndromes or with features of distant metastases. The latter are usually present in half of the cases at the time of the initial diagnosis. Bone, liver, adrenal glands, lymph nodes and brain being the commonest sites involved. Intraabdominal catastrophe secondary to small bowel metastases has rarely been described (2). Autopsy finding from a large North American series (2) showed small bowel metastases to be present in 46 of 431 (10.6%) patients with lung carcinoma. Of these, only six presented with clinical signs of small bowel pathology during their life time. In none of these, however, were small bowel lesions a presenting feature of the underlying lung carcinoma. A similar study from Denmark reported that of the 218 autopsies performed on patients with lung carcinoma, only 10 (4.6%) had small bowel metastases (4). The prevalence in Japanese literature is significantly less with only 30 of 1635 (1.8%) lung cancer patients having gastrointestinal metastases on postmortem examination, with the commonest primary being large cell lung carcinoma and the small bowel being the most common secondary site(8). This difference is mainly due to a better developed screening programme for malignancies resulting in early detection and treatment.

A clinical review of symptomatic small bowel metastases from lung cancer shows that of the 34 reported cases, the majority had abdominal pain as a presenting feature and the most favoured site for metastases was the jejunum (6). There have only been three reported cases of small bowel intussusception due to a lung secondary in the literature (3,4,5), with only a dozen cases of an asymptomatic lung tumor presenting with features small bowel obstruction due to metastases there (5,6).

The overall rate of metastases to small bowel from a lung primary is between 4.6-14%, as compared to 5.2% from malignant melanomas, suggesting that this may not be as

rare a feature as previously thought to be. This reason for this could be because patients tend to live longer after the diagnosis of their primary cancer owing to better and aggressive treatment modalities (6).

This case report emphasizes that metastasis to the small bowel can be from various carcinomas and with the increasing incidence of lung cancer, particularly in females, this possibility must be considered and appropriate investigation done at an early stage. In patients with small bowel obstruction, due to a secondary malignancy, a CT scan of the chest should be performed to attempt to demonstrate the primary lesion. It should, however, be borne in mind that prognosis of patients with small bowel secondaries from any primary source is dismal and the average life expectancy is only a few months after diagnosis.

CORRESPONDENCE TO

Adnan A Sheikh, MB, BS 5 Galbraith Close Aigburth
Liverpool L17 9PB Email: adnan_sheikh01@yahoo.com
Phone: 0044 1517260806

References

1. Serour F, Dona G, Brinkenfeld S, et al. Primary neoplasm of the small bowel. *Journal of surgical oncology - supplement*. Jan 1992;49(1):29-34
2. Mc Neil PM, Wagma LD, Nifield JP. Small bowel metastasis from primary carcinoma of the lung. *Cancer Apr* 5 1987; 59(8): 1486-9.
3. Testini M Trabuco, Di Venere B et al. Ileal intussusception due to intestinal metastases from primary malignant melanoma of the lung. *American surgeon*. Apr 2000; 68(4): 377-79.
4. Stenbygaard LE, Sorensen JB. Small bowel metastasis in non-small cell lung cancer. *Nov* 1999; 26(2): 95-101.
5. Berger A, Cellier C, Danieal C et al. Small bowel metastasis from primary carcinoma of the lung: clinical findings and outcome. *American Journal of gastroenterology*. Jul 1999; 94(7): 1884-87.
6. Mosier DM, Bloch RS, Cunningham PL et al. Small bowel metastases from primary lung carcinoma: a rarity waiting to be found? *American Surgeon*. Nov 1992; 58(11): 677-82.
7. Spedini C, Lombardi C, Buffoli F. Multiple mucosal gastrointestinal metastases from primary asymptomatic bronchogenic carcinoma. *Recenti progressi Medicina*. Jun 1990; 81(6): 42-4.
8. Ryo H, Sakai H, Ikeda T. Gastrointestinal metastasis from lung cancer. *Nihon Kyobu Shkkan Gakkai Zashi*. Sep 1996; 34(9): 968-72.

Author Information

Adnan A. Sheikh, M.B., B.S.

Department of Surgery, Royal Liverpool University Hospital Liverpool

R. Kumran, M.B., B.S., F.R.C.S.

Department of Surgery, University Hospital of North Staffordshire

Christine Hall, M.Ch., F.R.C.S.

Department of Surgery, University Hospital of North Staffordshire