



**A CASE REPORT OF LARGE BOWEL OBSTRUCTION: AN  
UNCOMMON INITIAL PRESENTATION OF LUNG CARCINOMA**

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| <p><b>Article Info</b><br/> <i>Received 27/12/2014</i><br/> <i>Revised 05/01/2015</i><br/> <i>Accepted 22/01/2015</i></p> <p><b>Key words:</b><br/>                 Abdominal complication, Acute large bowel obstruction, Squamous cell carcinoma</p> | <p><b>ABSTRACT</b><br/>                 We present an uncommon abdominal complication of lung carcinoma to refresh our knowledge about this topic. Discussion was done from both colorectal surgeons' and pathologists' point of view. Case Report - A 78-year-old man was admitted with the symptoms and findings of acute large bowel obstruction. Plain abdominal roentgenogram revealed distended, edematous, and air filled loops of large intestine. Colonoscopic examination confirmed the diagnosis with the finding of the mass that completely obstructed the lumen of the descending colon. The patient underwent an urgent laparotomy. The histopathologic examination of the specimen demonstrated tumor cells with intercellular bridges but no keratinization. Since the tumor was located below the muscularis propria and the surface epithelium was intact, a tumor metastasis to large bowel was suggested. Histopathologic examination of bronchoscopic biopsy showed squamous cell carcinoma. Metastases to gastrointestinal tract from primary carcinoma of the lung are more common than previously thought and obstruction of the large bowel may be the first manifestation of the tumor.</p> |
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**INTRODUCTION**

Acute obstruction of the large bowel is an important cause of the surgical acute abdomen. Treating a patient with large bowel obstruction (LBO) requires careful assessment and thorough knowledge of the possible causes. Of them colorectal cancer is the most common cause of LBO [1-3]. Another but a rare reason is a blood-borne metastatic involvement of the large bowel by cancer. According to the number of reports in the literature, the most common tumors that spread to the large bowel are melanoma, lung and breast cancers [4]. Most of these patients have a primary tumor that is already diagnosed and under treatment. When a patient with known tumor is admitted with abdominal complaints, the possibility of metastasis to the gastrointestinal tract should be searched. But, as in the case reported here, presentation of a patient with LBO as a first manifestation of lung cancer metastasis is a very rare entity.

Lung cancer is one of the most common malignancies. As the survival of the patients with lung

cancer improves, intra-abdominal metastases of bronchial carcinoma would be observed with greater frequency [5]. Thus, not only should we learn the common presentations and complications of lung carcinoma but also it is important for both thorax and gastrointestinal surgeons to be aware of its rare conditions. This instructive case would be an additional example of only a few lung cancer patients that have been reported in the literature up to now who admitted with LBO as an initial presentation.

**CASE REPORT**

A 78 year-old man was admitted to the hospital suffering from loss of appetite, weight loss, and colicky abdominal pain for a month and constipation, distension, nausea and vomiting in last three days. Rectal palpation showed no abnormality. X-rays demonstrated a distended, edematous and air filled colonic loops in the abdomen, but no significant alterations in the chest. On colonoscopic examination a vegetating mass, causing complete

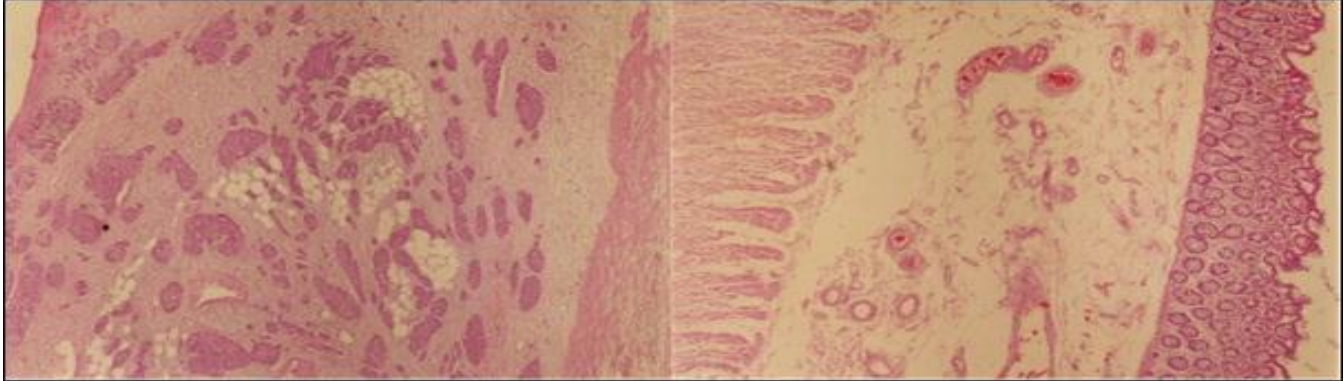


obstruction, was determined in the descending colon. Routine blood tests were normal. The patient underwent an immediate explorative laparotomy and a tumor, 6 centimeter in diameter, penetrating the serosa was observed. Other areas of the abdomen were free of tumor. After intraoperative colonic lavage, a standard left hemicolectomy and primary anastomosis was done. The patient had uneventful postoperative course.

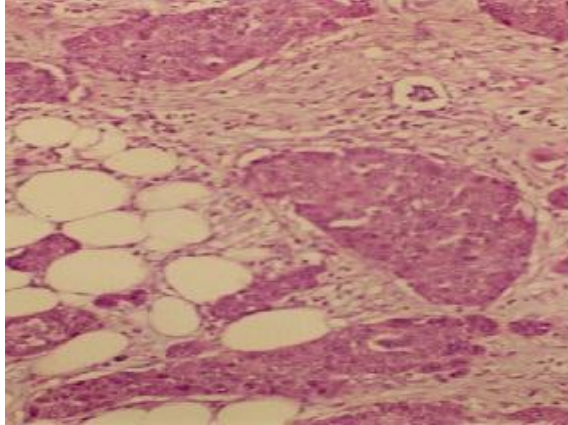
Histopathologic examination of the surgical specimen revealed tumor cells with abundant eosinophilic

cytoplasm with intercellular bridge formation (Picture 1). Interestingly the surface epithelium was intact and the tumor seemed to locate below the muscularis propria (Picture 2). Moreover, it sometimes invaded serosa (Picture 2, arrow). The diagnosis was squamous cell carcinoma and possible metastasis from lung was suggested. Bronchoscopic biopsy, taken several days later, confirmed the diagnosis with well-formed squamous pearl formation (Picture 3, arrow).

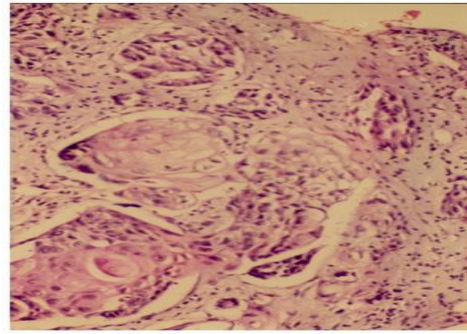
**Figure 1. In this full thickness colonic biopsy, squamous cell carcinoma cells are seen located above the serosa (arrow). Note intact surface epithelium on the right (H&E x 4)**



**Figure 2. Higher magnification of tumor cells (H&E x 40)**



**Figure 3. Well-differentiated squamous cell carcinoma with marked variation in size and chromatin. Pearl formation is easily seen at the bottom (arrowhead) of the bronchoscopic biopsy (H&E x 40).**



## DISCUSSION AND CONCLUSION

Like in our case, when an elderly patient admitted with acute LBO, the surgeon can easily expect that a malignant process might be the reason because in adults, the most common cause of LBO is carcinoma of the colon and rectum [6]; although, colorectal carcinoma itself does not cause obstruction very often [7,8]. Most of the gastrointestinal tract malignancies are adenocarcinoma but if colonic lesion in resected material is a squamous carcinoma, an extracolonic source should be sought since primary squamous cell carcinoma of the colon is extremely very rare [9,10]. One of the suggested clinical criteria to differentiate metastasis from primary colonic squamous cell carcinoma is evidence in any other organ of a squamous cell carcinoma that might provide a source of

intestinal metastasis [11]. Furthermore tumor cells limited to serosa and intact surface epithelium are also histologically important clues. It has been long known that

some metastatic tumors can mimic primary large bowel cancer; as a result, a patient who present with suspected colonic neoplasm and a past history of another malignancy should be considered to have possible metastatic disease, especially if the constriction appears extra-mucosal and the lesion is at the splenic flexure.

Metastasis of the lung carcinoma to large bowel is very rare and only infrequently symptomatic [5, 12-14]. Antler et al [15] reported in their 423 autopsy series of primary tumor of the lung that the overall rate of metastases to the gastrointestinal tract was 14%; the most



common site of involvement was esophagus (7.8%) followed by small intestine, whereas LBO due to metastasis, as observed in our case, was found only in two cases (0.47%). There are many other reports that describe metastasis of the lung tumor to the large bowel, but most of them were either postmortem series or about the patients whose primary tumor was already known at the time of presentation [12,13,15-17].

The case presented here is an extremely rare example of pulmonary carcinoma. The importance of our case is not only infrequent site of metastasis and a rare complication of the lung tumor but also the obstruction of large bowel was the reason of the initial presentation. Only a few patients of squamous cell carcinoma of the lung which presented with symptoms from a colonic metastasis, which mimics primary colonic tumor have been reported up to now [15,16,18,19]. Symptomatic gastrointestinal metastasis may occur early in the course of lung cancer [13]. Mirra et al [20] performed exploratory laparotomy in 122 patients with primary lung cancer and found asymptomatic abdominal metastases in 23.8% cases. They also found that, the clinical staging in 9.8% of the patients

was modified even in patients with clinical stage I and II. These findings are possible explanations of the question of why couldn't we find any evidence of lung carcinoma in our case at the time of presentation. Since survival after resection of colonic metastases from squamous cell lung cancer is similar to that for primary tumor, it is suggested that the patients with known or suspected squamous cell lung cancer presented with lower gastrointestinal symptoms be managed as aggressively as those with no previous history of disease [16].

Gastrointestinal tract metastases from primary carcinoma of the lung are more common than previously thought and may be associated with serious clinical complications. Because of the improved survival of the patients with lung cancer, intra-abdominal metastases of bronchial carcinoma may be observed with greater frequency. Metastatic large bowel carcinomas are rare and should be considered in the differential diagnosis of acute abdominal syndromes of patients with known history of the lung cancer. Bowel resection and debulking of the metastatic tumor mass give the best palliation and improve short-term survival.

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