

References:

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fluids, naso-gastric decompression and antibiotics. At laparotomy a litre of free, purulent fluid was found. There was a closed loop obstruction of the distal small bowel and ascending colon. Proximally multiple adhesions surrounded the terminal ileum and distally a completely stenosing lesion invaded the hepatic flexure of the colon. The same mass infiltrated the second part of the duodenum and was fixed to the retroperitoneum. The obstructed caecum and right colon were markedly distended. A right hemi-colectomy with end to end ileotransverse colostomy and repair of a small duodenal tear was done.

The patient's post operative course was stormy for 2 weeks. Complications included duodenal fistula with 400-900 ml daily output, cardiac arrhythmias, left ventricular failure, disseminated intravascular coagulation, acute respiratory distress syndrome and acute renal shutdown. Finally after a cardiac arrest, cardiopulmonary resuscitation was unsuccessful and the patient expired on the 10th post-operative day.

Histopathology:

Microscopy of the strictured area showed widely infiltrating large cell undifferentiated adenocarcinoma, mainly located in the muscular layer and mesocolonic fat. The overlying colonic mucosa was normal without any dysplastic changes. The pathologists feel that this impression was metastatic tumor, most likely originated from the lung.

Discussion:

Large bowel obstruction from metastatic large cell adenocarcinoma is an unusual presentation of primary lung cancer metastasizing to the large bowel. In the absence of biopsy or autopsy finding, the diagnosis of pulmonary adenocarcinoma is probable because of a highly suspicious, peripherally placed coin lesion in the lung on chest X-Ray. The metastatic tumor was confined to the muscular layer of colon with intact mucosa, suggesting a secondary lung tumor.

It is uncommon for primary lung cancer to metastasize to the gastrointestinal tract, especially the large bowel⁵ However, the phenomenon is not as uncommon as originally thought⁴. Attention has recently been focussed on this point and Table-1 summarizes the autopsy incidence of gastrointestinal metastases as quoted by various investigators especially the Japanese^{4,6}. The Incidence was

higher in autopsy cases when compared to clinical patients⁴. The explanation given is that most of the cases of gastrointestinal metastases are symptom free. In other cases dysphagia was the most common complaint in patients with oesophageal involvement whereas in patient with small and/or large bowel involvement nausea, vomiting and abdominal pain were the most frequently observed symptoms⁵. In our patient nausea, vomiting and abdominal pain preceded the admission by 4 months, before a sudden exacerbation required exploratory laparotomy and appendectomy.

Table 1. Gastrointestinal Metastases From Pulmonary Carcinoma at autopsy

Investigators	Site	% Metastases
K. Toyama et al	Small Intestine	4.1%
	Large Intestine	2.2%
Mori	Small Intestine	4.9%
Molita	Small Intestine	2.8%
	Large Intestine	3.0%
Yamagiva	Intestine	4.2%
Antler et al	Entire G.I.Tract	14%

Variable metastatic rates are reported in different histological types of primary lung cancer⁷. Squamous cell carcinoma tends to be locally invasive, whereas adenocarcinoma distantly metastasizes^{2,4,5}. In one series incidence of bowel metastases was high in squamous cell carcinoma, large cell carcinoma, adenocarcinoma and adenosquamous carcinoma in ascending order³. The metastatic rate was 33% in adenosquamous cell carcinoma, 11% in squamous cell carcinoma and 8% in adenocarcinoma³. Others emphasize that large and small cell carcinoma have high predilection for distant bowel metastasis⁷. The same author observed that the oesophagus was most commonly involved, (47%), the presumably due to local tumor extension and lymphatic spread. Other more frequently observed sites were small intestine (19%), stomach (9%) and large intestine (5%)³.

Hence in contrast to the previous understanding, gastrointestinal metastases from pulmonary malignancy is not a very uncommon condition, and in every patient with a known primary pulmonary malignancy, gastrointestinal symptoms should be treated with great suspicion for metastatic disease.

ISOLATED LARGE BOWEL METASTASIS FROM PRESUMED PULMONARY ADENOCARCINOMA

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Abstract:

The haematogenous spread of the primary lung carcinoma is generally widespread and the incidence is high. Clinically, metastasis to the bowel is generally not suspected, whilst autopsy studies have shown metastasis to the gastrointestinal tract in 2.2-14% of cases. We report a case of large bowel obstruction secondary to metastasis from a presumed pulmonary adenocarcinoma and present a review of literature.

Introduction:

Bowel metastases from primary pulmonary adenocarcinoma is well established⁵ but those cases of which we are aware have multiple metastatic foci and the bowel, large and small, tends to be involved in many sites, part of impending peritoneal carcinomatosis³.

The case we reported here is, we believe, unique in the sense that a solitary sheet like metastasis obstructed the hepatic flexure. The pathologist's opinion was that this was not a primary colonic tumor, the bowel mucosa was intact, and a convincing shadow on chest X-ray showed a probable pulmonary tumor.

Case Report:

A 61 year male was admitted through the Emergency Room with high grade spiking fever, constipation and abdominal distension for the last four days. Associated were nausea, repeated bilious vomiting and lethargy for three weeks. Hiccoughs and low urinary output developed during the last 24 hours before admission.

In the past, evaluated outside the Aga Khan University Hospital for four months history of anorexia, vague abdominal pain, associated off and on with nausea and vomiting. Abdominal ul-

tra-sound examination was normal as were cholecystography, barium enema and oesophago-gastroduodenoscopy. One month before admission an exploratory laparotomy was done for severe right lower quadrant abdominal pain. An appendectomy was done. We learned that apart from a badly inflamed retro-cecal appendix with localized pus collection, there were no other abnormalities at exploration.

The patient smoked at least 25 cigarettes a day for the last 40 years. He stopped smoking a year before admission.

On examination he was dehydrated and anemic. Pulse rate 110/min, oral temperature 36.6 degrees Centigrade. Cardiovascular and respiratory system examination was normal. The abdomen was markedly distended with a fresh right paramedian scar in the lower abdomen. There was generalized direct tenderness with no rebound tenderness or visceromegaly. An oval mass, 8 by 10 cm, tender and firm was felt in the right lower quadrant. Gut sounds were feeble and rectal examination showed an empty rectum with no tenderness.

Laboratory Investigations:

Normal hemoglobin - 11.1 gms/dl, packed cell volume - 33.3%, normal white cell count - 10,600/mm³, random blood glucose - 232 mg/dl, blood urea nitrogen - 21 mg/dl, serum creatinine - 1.2 mg/dl, serum sodium 127 meq/l, serum potassium - 3.0 meq/L, serum HCO₃ - 28.8 meq/L and serum Chloride - 81 meq/l. Total bilirubin - 0.9 mg/dl, Gamma Gt - 100 IU/L, SGPT-24 I.U./L and alkaline phosphatase - 95 I.U./l. Total serum proteins - 5.6 gms/dl with serum albumen - 2.6 gms/dl,

Admission Chest X-Ray showed one prominent retro-cardiac density with several adjacent smaller nodules. Plain abdominal X-ray showed intestinal obstruction.

Initial management was with intravenous

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