Synchronous Carcinoid Tumour And Tubercular Ileal Mass As A Cause Of Intestinal Obstruction After Renal Transplantion

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Citation

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Abstract

We report a 50-year old renal allograft recipient who on two occasions presented with features of intestinal obstruction, the second episode required laprotomy and surgery. Simultaneous two distinct lesions tuberculosis and carcinoid tumor were diagnosed on biopsy in this patient.

INTRODUCTION

Carcinoid tumor represents 29% of all small bowel malignancies and it occurs most frequently in the gastrointestinal tract [1, 2]. The incidence of carcinoid tumour in a renal allograft recipient is very low and occasionally it may cause partial small bowel obstruction. Tuberculosis is an important cause of mortality and morbidity in renal transplant recipient and intestinal tuberculosis in these patients is diagnosed postmortem or on exploratory laprotomy. The intestinal obstruction either due to tuberculosis or carcinoid tumor is rarely described in literature in renal allograft recipient .However, we are reporting simultaneous occurrence of tuberculosis and carcinoid tumour in small bowel, presenting as recurrent intestinal obstruction.

CASE REPORT

A 50-year old male diagnosed to have type 2 diabetes mellitus 15 years back, requiring insulin for last 10 years. He developed hypertension 10 years later, followed by edema, proteinuria and progressive renal failure for last five years. He was kept on hemodialysis for last 3 year and subsequently underwent renal transplantion in may,2005. Patient was negative for hepatitis B, C, human immuno deficiency virus (HIV) and Cytomegalovirus (IgM and IgG). He did not receive blood transfusions prior to transplantation. The donor was his one haplotype matched wife. He was immunosupressed with cyclosporine, azathioprine and prednisolone. For ten months post transplant, patient remained well without any acute rejection or major infective episode and his serum creatinine remained stable at 0.9 to 1.1 mg/dl. Twelve months post transplant, patient was admitted to hospital with acute gastroenteritis, mild dehydration and serum creatinine of 1.2 mg/dl. He improved after intravenous fluids and antibiotics. One month (thirteen months post transplant) later he was hospitalized with complaints of abdominal pain with distension, vomiting, hiccups and constipation .Physical examination revealed mild dehydration, blood pressure of 110/70 mmHg, abdominal distension, no rebound tenderness, no free fluid in abdomen with exaggerated bowel sounds. The clinical features were consistent with diagnosis of subacute intestinal obstruction. Laboratory investigations showed normal hemoglobin, cell counts and urine analysis. The graft function was stable with serum creatinine of 1.1 mg/dl and liver function tests were normal. He improved after receiving intravenous fluids, bowel enemas and his immunosuppressive medications were continued. He returned to hospital one month (fourteen months post transplant) later with abdominal pain and distension, vomiting and constipation. Examination revealed mildly dehydrated, normotensive patient with abdominal distension without organomegaly, lump or free fluid in abdomen with exaggerated bowel sounds. The other systemic examination was normal. Laboratory investigations revealed hemoglobin of 9.9 gm%, total leukocyte count of 9900/cmm with 70% neutrophils, 27% lymphocytes and 3% eosinophils. Platelet count was 96000/cmm. BUN (32 mg/dl) and serum

creatinine (1.6 mg/dl) were elevated over previous values. Ultrasound examination showed dilated intestinal loops and normal graft. Plain x-ray abdomen supine view showed gross dilatation of small intestines whereas erect film showed multiple air fluid levels in dilated small intestines without any free air under diaphragm [Fig 1]. Contrast study of intestines revealed dilated, obstructed loops of small intestines [Fig 2]. Exploratory laprotomy findings included; distended intestinal loops, extensive adhesions at multiple levels, multiple small nodules studding the intestinal loops and an intraluminal mass at ileum. Adhesinolysis was done, intestinal obstruction was released and 4 x 5 cms tumor removed from ileum after performing enterotomy.

Histopathology of resected mass from ileum revealed to be carcinoid tumor [Fig 3]. Multiple noncaseating tubercular granulomas with Langerhan's giant cells were observed on resected omentum and ileal mass [Fig 4]. Tubercular bacilli on Ziel-neilson staining were seen from ileal mass. Culture of the both tissue (ileal mass and omentem) grew mycobacterium tuberculosis. Thus, histopathology of resected tissue had simultaneous occurrence of carcinoid tumour and tuberculosis. The immunosuppressive (Cyclosporine, Azathioprine and Prednisolone) drugs were continued in same dose following surgery. Antituberculosis drugs (Ethambutol, Isoniazid, Pyrizinamide and Ofloxacin) were added in first week after surgery. However, he developed right sided lobar pneumonia and died of sepsis and respiratory failure on 20th postoperative day.

DISCUSSION

Overall, there is a three to five fold increase in risk of malignancies in renal transplant recipients compared with age matched controls in general population [3]. Carcinoid tumors represent 29% of all small bowel malignancies, 2nd only to adenocarcinoma in frequency.Carcinoids occur most frequently in GI tract (67%) where they are most common in small intestines (25%), appendix (12%) and rectum (14%) [1,2].We have noted carcinoid in the ileum in our patient. There are anecdotal reports of carcinoid occurring in renal transplant patients but the incidence is low [4, 5, 6].Tumors are often silent, discovered incidentally at laprotomy or autopsy. The most common presenting symptoms are vague non-specific abdominal pain and partial bowel obstruction may occur but is less common. [1, 7].Ten to seventeen percent of patients with small bowel carcinoid present with carcinoid syndrome [8, 9]. The patient under discussion did not have features of carcinoid syndrome.

Tuberculosis is an important cause of morbidity and mortality in renal transplant recipients. The incidence of tuberculosis in renal transplant recipients varies from country to country being 0-1.3% in USA [10] 3.5% in Saudi Arabia[11] 11% in South Africa [12] 11.8% in India [13] and 14.5% in Pakistan [14]. We have reported incidence of tuberculosis as 16.4% in renal transplant patients with almost equal frequency of pulmonary and extra pulmonary tuberculosis [15]. Screening for tuberculosis is carried in all prospective transplant recipients because of high incidence of tuberculosis in our population. Prophylaxis with INH is given to those who are at high risk of tuberculosis (i.e. family history, tuberculosis in past). Active tuberculosis is treated at least for 10-12 weeks prior to transplantation and anti-TB drugs continued post-transplant for total period of nine months. We do not use Rifampicin for recipient on Cyclosporine based immunosuppression because of known interaction between Rifampicin and Cyclosporine. Intestinal tuberculosis is not uncommon in renal transplant patients and most of the patients reported in literature were diagnosed post-mortem or after exploratory laprotomy and bowel, resection [16].The diagnosis of intestinal tuberculosis in our patient is also established on biopsy of resected tissue obtained at surgery. Intestinal tuberculosis causing small bowel obstruction in renal allograft recipient was reported in our previous study [17].

Our case presented with recurrent intestinal obstruction one year after kidney transplantation and on laprotomy, two distinct pathologies were noted. Intraluminal mass in ileum was histologically confirmed to be carcinoid tumor and multiple small nodules in ileum and omentum were confirmed to be tuberculosis on histopathology and microbiological examination of the specimen. Thus, both pathologies were observed in the same resected ileal mass. The carcinoid tumour was an incidental finding without any features of carcinoid syndrome. Whereas intestinal tuberculosis was responsible for multiple adhesions and small bowel obstruction .The presence of these two different lesions has not been previously reported to occur simultaneously in renal transplant patients. Laprotomy continues to be an important tool in diagnosis of intestinal tuberculosis as illustrated in our case.

CONCLUSION

To the best of our knowledge, simultaneous occurrence of two distinct lesions, tuberculosis and carcinoid tumour of small intestine were not reported before in renal allograft

recipient.

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