

## Diffuse Non-Hodgkin's Lymphoma of the Colon: A Rare Case Report

Mukesh Krishna V. <sup>1</sup>, Prasanna Kumar T.J. <sup>2</sup>, Vivek V. <sup>3</sup>, Premalatha P. <sup>4</sup>

<sup>1</sup> Mukesh Krishna V, Junior Resident, Dept. of General Surgery, NRI Medical College & General Hospital, Chinakakani, Guntur Dist, Andhra Pradesh, India.

<sup>2</sup> Prasanna Kumar T.J., M.S., Professor & HOD, Dept. of General Surgery, NRI Medical College & General Hospital, Chinakakani, Guntur Dist, Andhra Pradesh, India.

<sup>3</sup> Vivek V, M.S., Assistant Professor, Dept. of General Surgery, NRI Medical College & General Hospital, Chinakakani, Guntur Dist, Andhra Pradesh, India.

<sup>4</sup> Premalatha P. M.D., Professor & HOD, Dept. of Pathology, NRI Medical College & General Hospital, Chinakakani, Guntur Dist, Andhra Pradesh, India.

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**Abstract:** Non-Hodgkin's lymphomas (NHL) are a diverse group of cancers which arise from lymphocytes. The gastrointestinal tract is the predominant site for extranodal NHL. The incidence of NHL is 2.8% of all cancers worldwide. Here we report a case of a 53 year old male patient who presented with a huge lump in the right half of the abdomen since 7 months which was evaluated by several doctors outside but weren't able to come to a conclusive diagnosis, was operated here and eventually diagnosed as Diffuse NHL of the Colon.

**Key words:** Cancer, Colon, Gastrointestinal Tract, Lymphoma, NHL (Non – Hodgkin's Lymphoma).

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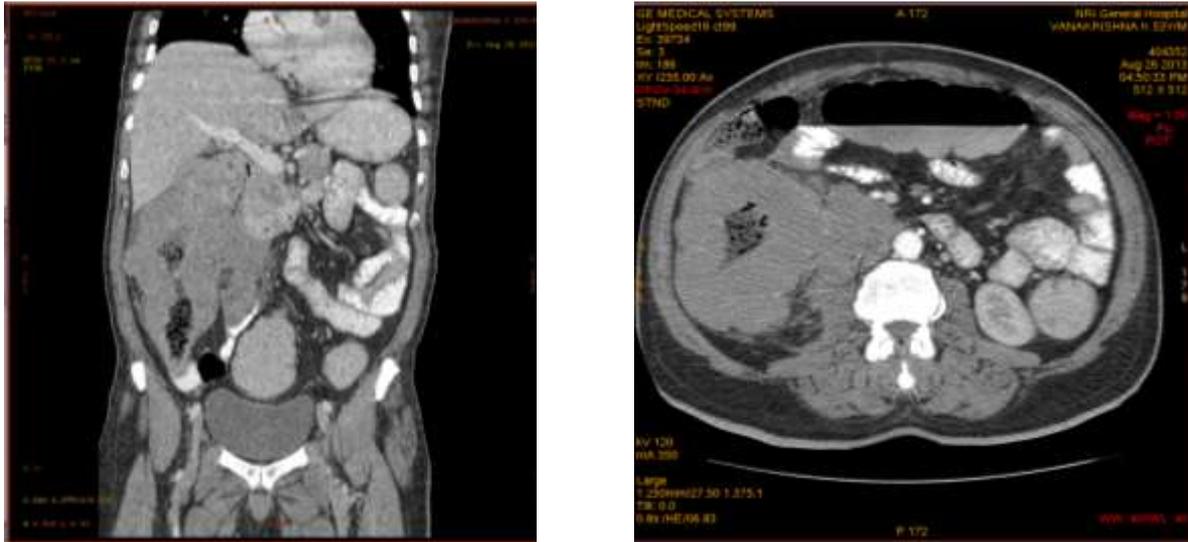
### I. Introduction:

Colorectal cancer is the third most common cancer in the world accounting for 9.8% of all cancers worldwide<sup>[1]</sup>. Of all the colorectal cancers just (0.2 – 1 %) are primary colorectal lymphomas<sup>[2,3]</sup>. NHL is 10th common cancer in the world accounting for 2.8% of all cancers worldwide. Although GI tract is the most common extranodal location for the development of Non- Hodgkin's lymphoma, the colon and rectum are uncommonly involved. The primary sites of origin in decreasing order of frequency include the Stomach (50–70%), Small bowel (20–35%), Colon (especially the cecum) (5–10%) and the Esophagus (<1%)<sup>[4,5]</sup>. The most common site of involvement are the ileocaecal region and caecum, probably because of more lymphoid tissue present normally in the ileocaecal region than any other part of the colon.

### II. Case Report:

A 53 year old male patient presented with a lump in the right half of the abdomen since 7 months, which was initially small in size, showed rapid increase in size since 2 months and caused dull aching abdominal pain in right loin radiating to the back since 4 months. He gave history of occasional bilious, non-projectile vomiting, altered bowel habits, melena, intermittent fever, loss of appetite and loss of weight. General examination revealed pallor and patient was afebrile with B.P. of 130/70 mm Hg, Pulse of 84/min, RR of 22/min. Abdominal examination revealed a single, mildly tender, firm, 12 X 14 cm mass in the Rt. Lumbar region, extending into Rt. Hypochondrium & Rt. Iliac regions. The mass is moving downwards with respiration, has restricted intrinsic mobility, bimanually palpable, falling forwards in knee-elbow position and there was no palpable Organomegaly. A dull note is heard on percussion with a band of resonance in front. P/R and other Systemic examination were normal.

Haemogram revealed Anemia ( Hb = 6.2gms% ) and a normal peripheral smear study. LFT showed Hypoalbuminemia ( Albumin = 2.1 gm/dl ) and Electrolyte Panel showed Hyponatremia ( Na<sup>+</sup> = 127 mmol/L ). Chest Radiograph showed no abnormalities. On Ultrasonography a 2.6cm diffuse circumferential wall thickening was noted involving the ascending colon at hepatic flexure and a preserved lumen with adjacent pericolic lymph nodes, with mild hepatomegaly and minimal ascites in Morrison's Pouch.



**Fig. 1 & 2 - CT - Scan showing the mass involving Ascending Colon & Caecum**

CECT Abdomen (Fig. 1&2) revealed “ Diffuse circumferential wall thickness involving ascending colon and caecum with adjacent nodes and secondary thickening of appendix with no evidence of obstruction - ? Lymphoma ”. Colonoscopy revealed a Large Ulcero-Proliferative growth in the hepatic flexure and a biopsy was done outside which was reported that the features are suggestive of chronic nonspecific granulomatous inflammation.

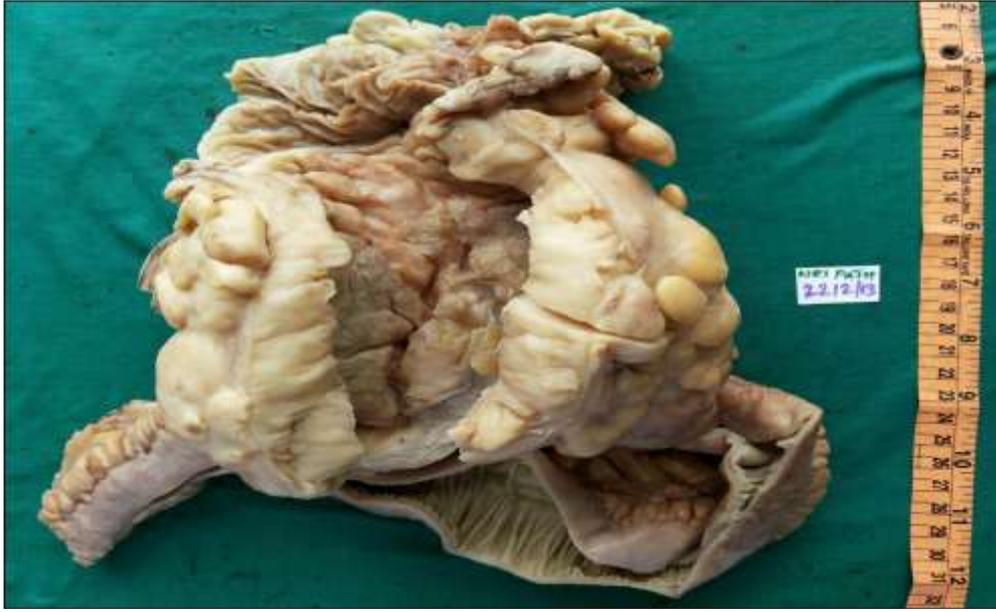
A laparotomy was performed with a midline incision, which revealed a 10 X 12 cm bulky mass arising from the caecum, ascending colon & hepatic flexure, abetting the right kidney & serosa of the duodenum (Fig. 3&4). Minimal ascites & radical mesenteric deposits were present. Right Hemicolectomy was done with an end to end ileo-transverse anastomosis.



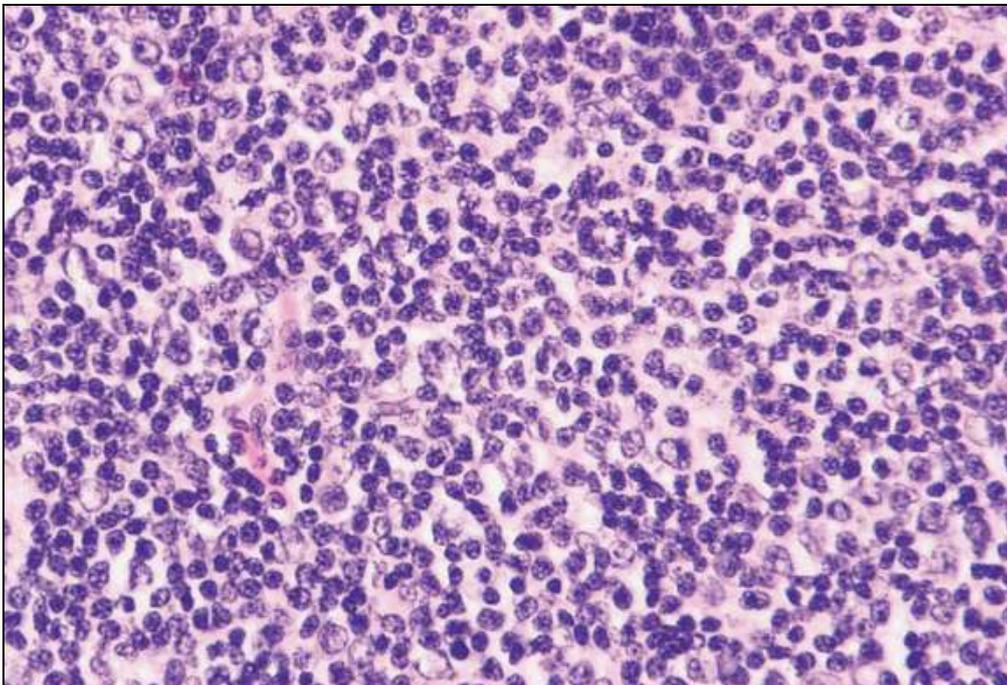
**Fig. 3 & 4 - Intraoperative Findings & Specimen**

The specimen (Fig. 5) was sent for Histopathology Reporting, which on microscopic examination showed “ Diffuse Non-Hodgkin's Lymphoma ” of intermediate grade involving mucosa, sub mucosa, muscularis propria, serosa and the adjacent omental fat. The overlying epithelium showed ulceration. The tumor cells were densely populated, with sheet like growth pattern, twice the size of mature lymphocyte, with scanty cytoplasm, irregular nucleus and dense chromatin. (Fig. 6)

Post-operative period was uneventful. The patient was referred to Oncology Dept. in our hospital and he was advised to undergo Chemotherapy by R-CHOP Regimen (Rituximab, Cyclophosphamide, Doxorubicin, Vincristine, and Prednisolone )



**Figure 5 – Gross Specimen**



**Figure 6 – Microscopic View ( H&E 450X ) showing Low Grade NHL (MALToma)**

### III. Discussion

Lymphomas appear to arise from the B- cells of the gut, "Mucous associated lymphoid tissue" (MALT). The most common symptom of colonic lymphoma are abdominal pain, anemia, and weight loss with a palpable abdominal mass identified on physical examination in half of the patients [3,6]. Primary GI NHL is more common among males than females [7]. Most common sites of involvement are ileocaecal region and caecum [8]. For most gastrointestinal tract lymphomas, no specific association with a preexisting disease or pathological lesion have been reported [9]. Helicobacter-pylori infection has been implicated in the pathogenesis of MALT gastric B-cell lymphomas. Hence it has been proposed that lymphomas of MALT arise in the setting of mucosal lymphoid activities that may result from Helicobacter associated chronic gastritis [10]. The increased risk of colorectal cancer among patients with inflammatory bowel diseases like Crohn's disease and Ulcerative colitis is also well established [11]. The lack of specific complaints probably accounts for the delay in the diagnosis. Colonic lymphoma may develop in patients with long standing inflammatory bowel disease or both diseases may present simultaneously [12]. Thus, the differentiation between these two diseases clinically may be even more difficult. The modern immunohistochemical (IHC) studies on tissue sections not only help to distinguish between these two conditions but also allow the immunological classification of lymphoma into either B or T- cell lineage [13]. CD20 is the most widely used pan B-cell marker and CD3 is pan T-cell marker. CD5, CD10 and BCL-2 markers help in further sub classification of B-Cell phenotypes. Modified Blackledge staging can be used to stage the tumor. The best treatment for GI lymphomas of any location remains uncertain. Most authors recommend laparotomy and tumor resection. Combined modality of approach that includes surgical debulking and systemic chemotherapy is the preferred treatment [14]. Surgery alone can be considered as an adequate treatment for patients with low-grade NHL disease that does not infiltrate beyond the sub mucosa [14]. Several studies have shown a high-rate of complete remission of low-grade MALT lymphomas confined to the stomach following eradication of H. pylori with antibiotics.

### IV. Conclusion

Gastrointestinal lymphomas represent a heterogeneous group of lymphomas due to the differences in pathogenetic mechanism underlying each entity. These are rare entities and many questions regarding their management remain unanswered. Though GIT is the most commonly involved site of NHL, Primary colonic lymphomas of the large intestine are rare, with caecum being the most common site of occurrence. The diagnosis is often delayed in most cases as the symptoms are unspecific. The major presenting clinical symptom is only abdominal pain and diagnosis is usually based on incidental findings. Selection of treatment in gastrointestinal lymphomas should be based on the histological type and the organ-specific problems. Surgical resection is the mainstay of treatment for localized primary lymphomas, followed by postoperative chemotherapy. Those with limited stage disease may have prolonged survival when treated with aggressive chemotherapy.

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