Primary Cecal Diffuse Large B-Cell Lymphoma

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Background

Approximately 40% of extra-nodal lymphomas occur in the gastrointestinal tract.[1] Primary colorectal lymphomas are uncommon, making up 3% of all gastrointestinal lymphomas and 0.2% to 1% of all colorectal malignancies.[2,3] Among the histological classifications of colorectal lymphoma, diffuse large B-cell lymphoma has been reported as the most common subtype.[3] We herein describe the case of an 88 year old patient with primary diffuse large B-cell lymphoma who presented to outpatient general surgery with a grossly visible right lower quadrant abdominal mass.

Methods and Procedures

Our patient is an 88-year-old male that came to the office for an abdominal mass. CT scan of the abdomen showed thickening of the cecum and right colon. Colonoscopy with biopsy was performed demonstrating non-Hodgkin's lymphoma of the cecum with near complete obstruction. Laparoscopic right hemicolectomy with primary anastomosis was done. Patient had a prolonged hospital stay due to post-operative ileus and was discharged without further complications. No other masses or metastasis were evident during surgery. Patient followed up with the oncology service outpatient but denied further imaging or adjuvant chemotherapy at that time. Upon follow-up in the office two years later after surgery alone, there is no recurrence, and the patient is without obstructive symptoms and with good quality of life.

Pathology

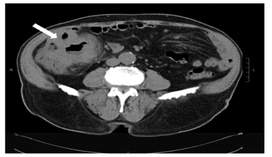
Pathology of the surgical specimen showed a gross specimen that was composed of a 10 x 8 x 3cm large ulcerated pink-red to tan-white mass in the cecum with near complete obstruction of the lumen. Diagnosis revealed diffuse large B-cell lymphoma with full-thickness involvement of the serosa and appendix tip, excluding involvement of lymph nodes. Immunohistochemistry demonstrated a double expression phenotype with BCL-2 and MYC positivity. FISH analysis was negative for MYC rearrangement indicating unlikely possibility of high-grade B-cell lymphoma.

Presentation

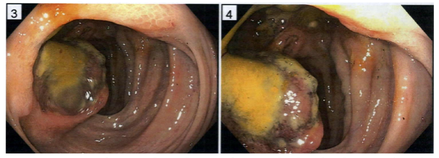
Patient is an 88-year-old male with multiple comorbidities that presented to the outpatient general surgery clinic with the complaints of right lower quadrant swelling and mass. Patient stated an ultrasound was previously performed with suspicion for an abdominal hernia. The patient denied loss of blood in stool or abdominal distension but had noted 30-lb weight loss over the last 6 months. Patient denied previous abdominal surgery. On review of systems, patient denied fevers, chills, appetite changes, abdominal pain, nausea, vomiting, and any changes in bowel habits. Abdominal examination demonstrated abdominal tenderness with palpation of the right lower quadrant along with a palpable abdominal mass. There was no distension or hepatosplenomegaly noted. Laboratory evaluation demonstrated iron-deficiency anemia with a hemoglobin of 9.4, hematocrit of 30.1, and mean corpuscular volume of 80.5. CEA level was within normal limits at 1.3. White blood cell count, electrolyte levels, liver function, and kidney function tests were all within normal limits.

A CT scan was performed which demonstrated marked wall thickening of the cecum suspicious for colorectal carcinoma and an outpatient colonoscopy was scheduled.

Figure 1 (right): Primary colonic diffuse large B-cell lymphoma of the cecum on non-contrast CT.
Figure 2 (below): Colonoscopy findings demonstrating large, friable mass in proximal ascending colon.



Colonoscopy results demonstrated a large, friable mass in the proximal ascending colon and cecum with near complete obstruction of the lumen.



A biopsy of the mass was performed and sent for pathological examination. Cytological evaluation demonstrated non-Hodgkin's lymphoma. Patient was sent for a CT scan of the chest to evaluate for evidence of metastases which was negative. Patient followed up in outpatient general surgery clinic and after thorough discussion of the risks, benefits, and alternatives, patient was scheduled for a laparoscopic right hemicolectomy with lymph node dissection. Patient understood that surgery may not be curative but needed palliative care due to near complete obstruction from the mass.

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Surgical Management

Patient was placed in the supine position and induced with general anesthesia. Abdomen was accessed laparoscopically using a Veress needle and 4 trocars were placed in the supraumbilical, left epigastric, right lower quadrant, and left lower quadrant regions. Under direct visualization, there were no injuries from abdominal access. A large mass was identified in the cecum with extensive attachments between the terminal ileum and colon that were released using LigaSure. A medial to lateral approach was started by identifying and ligating the ileocolic vessel. No bleeding was noted after ligation and the mesentery was divided with caution to avoid injury to the duodenum. The mesentery was dissected medial to lateral with identification of the Gerota fascia and further mobilization of the colon upward. The sidewall attachments of the ascending colon were identified and dissected from the cecum to the hepatic flexure following the White Line of Toldt. Attention was directed towards the gastrocolic ligament which was dissected towards the hepatic flexure. The right branch of the middle colic artery was ligated using the LigaSure device. Complete mobilization of the ascending colon was completed without complication. A 5cm midline incision was created in the supraumbilical region with placement of the Alexis retractor and the mass was externalized. The terminal ileum was identified and transected using the 75 blue-load linear stapler. The transverse colon was then identified and transected in the same fashion. The specimen was removed and sent to the pathology lab. A stay suture was created using three silk sutures between the antimesenteric border of the terminal ileum and taenia coli of the ascending colon. An enterotomy was made in the transverse colon and the antimesenteric border of the terminal ileum. An anastomosis was created between these two sites using the 75 blue-load GIA linear stapler. The anastomosis was closed using a 2-layer approach with 3-0 vicryl interrupted sutures and 3-0 silk Lembert interrupted sutures. The anastomosis was intact with no complications or bleeding evident. The wound protector and trocars were removed. The fascia was closed using #1 PDS suture. The wound was irrigated, and skin closed using a stapler. Dressing was applied over the wounds. The patient tolerated the procedure with minimal blood loss and was transferred to the PACU in stable condition.

Conclusion

Diffuse large B-cell lymphoma is the most common subset of primary colorectal lymphomas, a rare malignancy. Currently, there are no clear guidelines for the treatment of these cases. This case demonstrated treatment with laparoscopic hemicolectomy alone. We suggest further reporting and study of primary colorectal lymphomas with the intent to produce an algorithm to standardize treatment.

References

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