



How to do it: Splenic flexure mobilisation via medial trans-mesocolic approach

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ABSTRACT

Complete splenic flexure mobilization is a critical step in left-sided colorectal resections. Surgeons use three approaches-anterior, medial, and lateral-to divide peritoneal ligaments connecting the left colon. The decision to perform mobilization varies, with minimal impact on post-operative outcomes but longer surgery times and rare complications. Pancreatic injury risk is low, though other structures, like arteries and the duodenum, may be at risk. Our video outlines the medial trans-mesocolic approach, with the patient positioned in lithotomy. We expose the duodenal-jejunal flexure, ligate the inferior mesenteric vein, and perform medial to lateral dissection, completing splenic flexure mobilization. This video vignette outlines how to perform this technique for left sided colorectal resections.

Keywords: Laparoscopic surgery, colorectal, colorectal cancer, left hemicolectomy, anterior resection

Video link: <https://turkjsurg.com/video/UCD-6258-v1.mp4>



How I do it

Complete splenic flexure mobilization is a technically challenging step in performing left sided colorectal resections including left hemicolectomy and anterior resection. The aim of performing splenic flexure mobilization is to achieve adequate oncological resection margins with complete mesocolic excision and allow a tension free anastomosis for gastrointestinal continuity (1). There are three techniques described in literature to perform splenic flexure mobilization, which can be characterized into anterior approach, medial approach, and lateral approach (2). In each approach, the primary aim is to divide the peritoneal ligaments that connect the left colon to surrounding structures including the gastrocolic ligament, splenocolic ligament, phrenocolic ligament and pancreaticocolic ligament.

Splenic flexure mobilization may be performed routinely, selectively, or not at all by surgeons. A recent meta-analysis regarding post operative outcomes following splenic flexure mobilization in laparoscopic and open left sided resections has revealed no statistically significant difference in anastomotic leak, conversion to open, post-operative bleeding, intra-abdominal collection, ileus, wound infection, length of stay, R0 resection margin and local recurrence rates (3). The meta-analysis has also shown significantly longer operative time and higher incidence of intra-operative complications although overall rare with splenic flexure mobilization (3). Pancreatic injury during splenic flexure mobilization is rare (0.6%); however, it can lead to major complications if they occur (4). Other structures that may be injured during dissection are left branch of middle colic artery, marginal artery, duodenum, spleen, inferior mesenteric vein, and left ureter. When comparing the three approaches to splenic flexure mobilization, the lateral approach had higher rate of intraoperative complication compared to medial and anterior approach (5).

In the video S1, we outline the necessary steps to perform splenic flexure mobilization with a medial trans-mesocolic approach. The patient is positioned in litho-

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tomy with left side tilt and ports placed to triangulate towards the left upper quadrant. The first step involves exposure of the duodenal-jejunal flexure. Adhesions around the duodenal-jejunal flexure are taken down to expose the inferior mesenteric vein. The inferior mesenteric vein is seen just lateral to the duodenal-jejunal flexure and is ligated at the lower border of the pancreas. Medial to lateral dissection begins inferior to the inferior mesenteric vein in the embryological plane above Gerota's fascia. Dissection continues until the left colonic wall is visualized. The lesser sac is then entered inferiorly through the avascular window in the transverse mesocolon, superior to the duodenal-jejunal flexure. The pancreaticocolic ligament is divided which connects the dissection created earlier to the lesser sac. A Raytec is placed in the space once medial dissection is completed. The greater omentum is then divided above the transverse colon to enter the lesser sac. Dissection is continued laterally towards the splenic flexure. Lateral dissection is continued through the left paracolic gutter until the Raytec placed earlier is visualized. This completes splenic flexure mobilization, and the planned surgical resection is continued.

Ethics/patient consent

The patient featured in this video has provided written consent for medical videography and publication. This can be supplied on request by contacting the corresponding author. Providing written consent satisfies the ethical requirements at our institution for the purposes of educational publication.

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VİDEO MAKALE-ÖZET

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Medial transmezokolik yaklaşımla splenik fleksür mobilizasyonu: Nasıl yapılır?

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ÖZET

Tam splenik fleksür mobilizasyonu, sol taraflı kolorektal rezeksiyonlarda kritik bir adımdır. Cerrahlar sol kolonu sabitleyen peritoneal ligamentleri bölmek için anterior, medial ve lateral olmak üzere üç yaklaşım kullanmaktadır. Mobilizasyon gerçekleştirme kararı, ameliyat sonrası sonuçlar üzerinde minimal etkiye sahip olmakla birlikte daha uzun ameliyat süreleri ve nadir komplikasyonlarla değişmektedir. Pankreas yaralanması riski düşüktür ancak arterler ve duodenum gibi diğer yapılar risk altında olabilir. Videomuz, hasta litotomi pozisyonundayken medial transmezokolik yaklaşımı özetlemektedir. Bu teknikte, duodenal-jejunal fleksurayı açığa çıkarıyoruz, inferior mezenterik veni bağlıyoruz ve medialden laterale diseksiyon gerçekleştirerek splenik fleksura mobilizasyonunu tamamlıyoruz. Bu video, sol taraflı kolorektal rezeksiyonlar için bu tekniğin nasıl uygulanacağını özetlemektedir.

Anahtar Kelimeler: Laparoskopik cerrahi, kolorektal, kolorektal kanser, sol hemikolektomi, anterior rezeksiyon

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