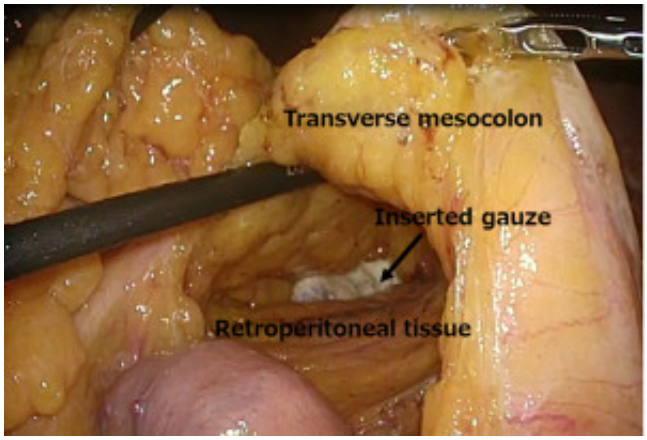
A new approach in laparoscopic colorectal cancer surgery

Laparoscopic surgery for colorectal cancer has been increasingly performed worldwide because it is less invasive and has superior cosmesis with good surgical outcomes. However, laparoscopic surgery is sometimes excluded as an option for some patients with colorectal cancer. For example, when the splenic flexure of the colon has to be detached from the adjacent organs, such as the pancreas and spleen, during colorectal cancer surgery, open surgery may be performed instead of laparoscopic surgery. This procedure, known as splenic flexure mobilization (SFM), is sometimes required for secure reconstruction during colorectal cancer surgery. SFM can increase the mobility of the left-sided colon and permit successful anastomosis of the colon with the rectum, avoiding a colostomy.

Schema of a three-step method

Laparoscopic SFM is technically difficult and time-consuming. Furthermore, there is no standardized technique. Subsequently, open surgery is selected instead of laparoscopic surgery for some patients with colorectal cancer. To overcome this problem, the following three-step method has been developed for laparoscopic SFM:
Step one: The mesocolon of the transverse and descending colon is detached from the retroperitoneal tissue, and utilizing a magnified laparoscopic view, a tunnel is created on the appropriate plane. This procedure is very suitable for laparoscopic surgery because the unique horizontal view from the caudal side obtained through laparoscopic surgery could never be obtained during open surgery. Gauze is placed in the tunnel prior to the next step.



A tunnel created in step one

Step two: The transverse mesocolon is detached from the pancreas and spleen. The transverse mesocolon is attached to the pancreas, spleen and retroperitoneum, and its detachment from these adjacent organs is technically difficult. In step one, detachment of the mesocolon from the retroperitoneum was completed. Therefore, in step two, using the inserted gauze as a landmark, detachment of the mesocolon from the pancreas and spleen is easily completed. If the pancreas is injured during this procedure, peritoneal abscesses due to pancreatic fistulas may develop post-surgery. Additionally, injury to the spleen will usually result in massive bleeding. Therefore, insertion of the gauze in the tunnel at the first step is very important.
Step three: The splenic flexure of the colon remains fixed to the left abdominal wall. In this step, this lateral attachment of the splenic flexure is cut, and the laparoscopic SFM is completed.

We have performed laparoscopic SFM using this three-step method with no complications. The mean time for laparoscopic SFM using this method was less than 1 h. This method is safe and simple and could be a standard procedure for laparoscopic SFM. We hope more patients can receive the benefit of laparoscopic surgery using this method.

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Publication

A Three-Step Method for Laparoscopic Mobilization of the Splenic Flexure.
Matsuda T, Iwasaki T, Hirata K, Tsugawa D, Sugita Y, Sumi Y, Kakeji Y.
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