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学位論文の題名	Impact of the indocyanine green fluorescence method for anastomotic blood flow in robotic distal gastrectomy (ロボット支援幽門側胃切除におけるインドシアニングリーン蛍光法による吻合部血流評価の効果) Surgery Today, 52:1405-1413, 2022
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Abstract

Although not as frequent, anastomotic complications, such as leakage and stenosis, still occur in certain patients with delta-shaped anastomosis. The purpose of this study is to evaluate the blood flow at the site of delta-shaped anastomosis during robotic distal gastrectomy and determine surgical outcomes and risk factors for ischemia at the anastomotic site from the perspective of clinical characteristics, surgical outcomes and perigastric vascular anatomy.

This study included 55 patients who underwent robotic distal gastrectomy with a blood flow evaluation in the duodenal walls using intravenous indocyanine green (ICG) injection with the da Vinci Xi-equipped Firefly system. Additional resection was performed in patients with a poor blood flow. Clinical characteristics, surgical outcomes and perigastric vascular anatomy were compared between the 45 patients with sufficient blood flow (group S) and the 10 patients with insufficient blood flow (group I). Vascular anatomy was assessed by preoperative contrast-enhanced computed tomography according to Hiatt's classification.

The patient characteristics and surgical outcomes were not significantly different between both groups. No patient developed anastomotic complications requiring intervention; more patients in group I had aberrant branching of the left hepatic artery than those in group S ($p = 0.047$).

An ICG-based blood flow evaluation might be an effective method of preventing anastomotic complications of delta-shaped anastomosis. Anatomical branching variations of the left hepatic artery might be a risk factor for impaired vascular perfusion of the anastomotic site.