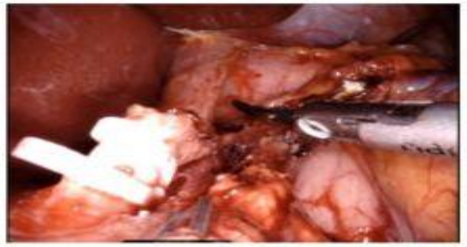
"ALL THAT GLOWS GREEN IS NOT NECESSARILY GREAT": CRITICAL APPRAISAL OF INDOCYANINE GREEN (ICG) PERFUSION ASSESSMENT DURING ROBOTIC ESOPHAGECTOMY

Akshay Pratap, MD; Martin D McCarter, MD; John D Mitchell; Robert Meguid, MD; University of Colorado Anschutz Medical Campus

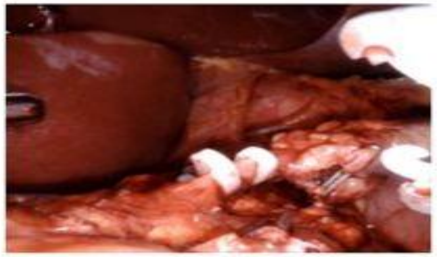
Background: Currently intraoperative ICG perfusion visual assessment gives the surgeon an opportunity to assess adequate vascularity of the conduit during esophagectomy. We aimed to study ICG perfusion in patients undergoing total gastrectomy for gastric cancer to replicate perfusion assessment of gastric conduit during esophagectomy.
Methods: Three patients undergoing total gastrectomy for gastric cancer were studied with ICG perfusion at every step of ligation of gastric blood supply. Three mg of ICG was injected as a bolus after transection of short gastric, left gastroepiploic, right gastroepiploic, right gastric and left gastric artery. Visual assessment of the blood supply of the greater curvature of stomach what would be the gastric conduit for an esophagectomy was compared with the ICG fluorescence imaging pattern of perfusion.
Results: ICG florescence and pulsatality of transected short gastric arcade was visually appreciated at greater curvature of stomach even after transection of all five major pedicels supplying the stomach including the right gastroepiploic pedicle. This indicated collateral flow from duodenum since distal esophagus was transected.
Conclusions: The ICG technique remains subjective and visual assessment of ICG florescence can surreptitiously overestimate perfusion. A consensus statement and larger randomized trials are needed on how the technique should be quantified and interpreted to have positive impact on anastomosis.



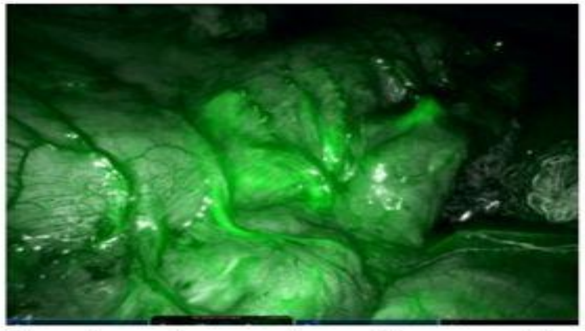
Left Gastric pedicle transection



Right Gastroepiploic pedicle transection



Right Gastric pedicle transection



Visual appearance of perfusion at greater curvature after complete devascularization of stomach