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Intestinal Transplantation for Mesenteric Desmoid Tumor Related Intestinal Failure Is Associated With Restoration Of Enteral Autonomy And Long-Term Recurrence-Free Survival

Background: Intra-abdominal desmoid tumors can exhibit locally aggressive behavior that may compromise intestinal integrity and function. Intestinal failure can result from a variety of sequelae including: 1) obstructive symptoms due to local compression or bowel entrapment, 2) penetrating complications including fistula formation and intra-abdominal abscess due to tumor invasion of the bowel wall, 3) short bowel syndrome due to intestinal resections, 4) treatment related radiation enteropathy. Intestinal or multi-visceral organ transplantation may have a role as a rescue intervention in medically refractory cases when intestinal function is compromised or for those tumors encasing the mesenteric vasculature deemed unresectable by conventional techniques. While desmoid tumors are known to recur after conventional surgical resection even with wide resection and negative surgical margins, long-term recurrence after intestinal transplantation has not been well-characterized.

Methods: We performed a retrospective chart review of 7 patients with desmoid tumor and intestinal failure who underwent tumor resection and either intestinal transplantation or multi-visceral organ transplantation between 2002-2020. We describe our single center experience regarding outcomes following transplantation including restoration of enteral autonomy, recurrence of mesenteric desmoid, and patient survival.

Results: Seven patients with mesenteric desmoid tumor and intestinal failure underwent intestinal transplantation. Six of 7 patients (86%) were referred for transplantation from a tertiary care medical center. All patients (n=7) had prior surgical resections with desmoid tumor recurrence at the time of referral. One of the 7 patients (14%) died within one year of transplantation due to post-transplant infectious complications and six patients (86%) survived with a median follow-up of 108 months Thirteen to 228 months after transplantation, 6 patients were alive, enterally autonomous, and free of desmoid tumor recurrence.

Conclusions: Intestinal transplantation can be considered as a rescue intervention in those patients with medically refractory mesenteric desmoid tumor with impending or established intestinal failure. Intestinal transplantation can restore intestinal function and enteral autonomy. Long-term disease-free survival after intestinal or multi-visceral transplantation may be favorable at centers with expertise in intestinal transplant and warrants further investigation.