Lanreotide Autogel/Depot (LAN) Post-Octreotide Long-Acting Release (OCT) for Safe and Tolerable Treatment of Gastroenteropancreatic Neuroendocrine Tumors (GEP-NETs)

M. Wasif Saif[1]; Julie Fu[1]; Melissa Smith[1]; Antonia Maloney[2]; Valerie Relias[2]; Barabara J Weinstein[2]; Yvelisse N Suarez[3]; Martin D Goodman[2]; Kevin P Daly[2]

[1]Tufts University Medical Center; [2]Tufts Medical Center; [3]Tufts medical Center

Background: The Controlled Study of Lanreotide Antiproliferative Response in Neuroendocrine Tumors (CLARINET) demonstrated LAN provides significantly prolonged progression-free survival for unresectable, well/moderately differentiated, locally advanced or metastatic GEP-NETs.[1] However, assessment of LAN after OCT treatment among GEP-NET patients is still needed. This case series measured LAN tolerability for GEP-NETs patients who had disease progression, lack of OCT tolerance, or changed therapy.

Methods: This is a retrospective chart review of GEP-NETs patients at Tufts University Medical Center who received LAN post-OCT. Information obtained included demographic data, tumor stage/grade, somatostatin analog treatment/dose, baseline/current levels of biochemical markers (chromogranin [CgA], urinary 5-hydroxyindoleacetic acid [5-HIAA, seratonin]), radiological response, and adverse events (AEs).

Results: Patients (n=15; 43-81 yrs; 5 men) with non-functional, low-grade GEP-NETs receiving OCT 30-60mg were switched to LAN. Metastatic sites, locations, grades of primary tumors, and reasons for switching are presented in Table 1. LAN started at 120mg (n=13), 90mg (n=1), or 60mg (n=1) based on renal dysfunction, and median number of LAN cycles=5.23 (range 2-10). 5-HIAA values were obtained (n=5, baseline: 3.6-8.7mg/L, post-LAN: 3.1-4.1mg/L). Both serum serotonin (<10-1280 to <10-533ng/mL) and CgA levels (7-38,200 to <5-660nmol/L; normal ≤15nmol/L) decreased. Gastrin declined (n=1; 239 to 76pg/mL; normal: ≤100pg/mL), PPP declined (n=1; 1401 to 387pg/mL; normal: 60-69 yrs: <312pg/mL), and ACTH decreased (n=1; 92 to 10pg/mL; normal: 6-50pg/mL). Concomitant therapies included chemotherapy (n=2), targeted agents (n=3), surgery (n=2), and liver-directed therapy (n=5). Radiological responses were SD (n=7), PR (n=4), PD (n=1), CR (n=1), or not reported (n=2). Treatment-related AEs included fatigue (n=3) and constipation, diarrhea, nausea, hyperglycemia (all n=1).

Presented at NANETS 2016

Conclusion: Among these post-OCT GEP-NET patients who experienced disease progression and poor OCT tolerance, LAN alone or with concomitant therapies was well tolerated. LAN was also associated with biochemical and radiological responses.

1. Caplin ME, et al. NEJM. 2014;371:224-33.

Table 1: Tumor locations and grades, metastatic sites, and factors that resulted in changing to treatment with LAN

Location of primary tumors	Tumor grade	Metastatic sites	Reasons for changing treatment
Pancreas (n=4)	Pre-G1	Liver (n=5)	Increased serological marker, new liver lesion
Small bowel (n=3)	G1 (n=6)	Liver, mesentery	Diarrhea and abdomen pain
Gastric (n=2)	G1-2 (n=2)	Liver, right inguinal node	Progressive disease (liver)
Unknown (n=2)	G2 (n=4)	Liver, lymph node (n=2)	Cost, GI pain, nausea
Ileocecal	G3	Liver, spleen	Radiological, serological PD
Med LN	NA	Liver, spleen, bone, lung	GI upset, bone progression (stable liver)
Antrum		N/A (n=3)	Serological marker, serological progression (n=2)
Duodenum		Small bowel, peritoneal fluid (adenoma)	Intolerance, low muscle mass (anorexia)
			Patient decision (n=6)

n=1 unless otherwise indicated