

C-45

Management of Duodenal Neuroendocrine Tumors: Surgical Versus Endoscopic Mucosal Resection

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BACKGROUND: Management of duodenal neuroendocrine tumors (DNETs) is not standardized, with lesions <1-2 cm treated by endoscopic mucosal resection (EMR) and larger DNETs by surgical resection (SR). This study analyzed how patients were selected for resection and compared outcomes.

METHODS: Patients with DNETs undergoing resection were identified through institutional databases, and clinicopathologic variables recorded. Chi-squared and Wilcoxon tests compared variables. Survival was determined by Kaplan-Meier analysis, and Cox regression tested association with survival.

RESULTS: In 104 patients, 64 underwent EMR and 40 had SR. Patients selected for SR had larger tumors, higher T-stage, more frequent metastases, and younger age. There was no difference in progression-free (PFS) and overall survival (OS) between EMR and SR patients. Ten patients had local recurrence post-EMR. Of these, 4 underwent repeat EMR and 4 underwent SR. In 1-2 cm DNETs, PFS was not different between SR vs. EMR. However, improved OS was seen in SR vs. EMR patients (median NR vs. 112 months, $P = 0.01$). In 1-2 cm DNETs, SR patients were more likely to be node-positive and younger. After adjustment for age, resection method did not correlate with survival. Comparison of SR patients with DNETs vs. 278 with jejunoileal NETs revealed significantly longer PFS (median NR vs. 73.4 months, $P = 0.001$) and OS (median NR vs. 119 months, $P = 0.004$) in DNET patients.

CONCLUSION: More advanced DNETs are selected for SR. For 1-2 cm DNETs, SR was associated with longer OS, likely due to older age in the EMR group.

Recurrences could be salvaged, suggesting initial EMR is a reasonable strategy. In comparison to jejunoileal NETs, DNETs treated by surgery had improved PFS and OS.

ABSTRACT ID: 64

Duodenal neuroendocrine tumors: endoscopic mucosal vs. surgical resection				
Category	Level	EMR (n = 64)	Surgical resection (n = 40)	P value
Age at resection, median (range)		69.4 (28.5-87)	57.9 (36.9-75.6)	<0.001
N stage (%)	N0	26 (90%)	14 (40%)	<0.001
	N1	3 (10%)	21 (60%)	
M stage (%)	M0	54 (98%)	27 (71%)	<0.001
	M1	1 (2%)	11 (29%)	
Tumor size (mm), median (range)		7 (1-36)	15 (5-148)	<0.001
PFS, median, months		NR	NR	0.66
OS, median, months		141	NR	0.11
Follow-up, median, months		92	97.8	0.82