

Oncological Outcomes After Elective and Emergency Resection of Small Intestinal Neuroendocrine Tumours

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Abstract:

Purpose: Small intestinal neuroendocrine tumour (siNET) has distinct features and disease course compared to other gastrointestinal neuroendocrine tumours. While they mostly present with subtle symptoms, they also can present acutely requiring emergency surgical intervention. We assessed the impact of surgical intervention timing on oncological outcomes of siNET.

Method: A retrospective observational single centre cohort study of all patients diagnosed with siNET, and received surgical intervention at a tertiary level hospital between 2008 and 2025.

Results: A total 67 patients were diagnosed with siNET. 23 patients were excluded due to incomplete data. Total of 44 patients met the inclusion criteria, with 30% underwent emergency resection (n = 13) and 70% underwent elective resection (n = 31). Small bowel obstruction represented the most common cause for emergency presentations (61%), while incidental radiological findings (39%) and carcinoid syndrome (35%) accounted for most elective presentations. Emergency cases were associated with the absence of pre-operative somatostatin receptor imaging, less findings of mesenteric mass (31% vs 81%), more likelihood of post operative macroscopic residual disease (46% vs 23%) and disease specific mortality (75% vs 23%). However, there was no statistically significant difference between the two groups in primary and secondary oncological outcomes.

Conclusions: Although emergency surgery was associated with limited preoperative staging and higher proportion of R2 resections, no statistically significant differences in overall survival, recurrence-free survival, carcinoid symptom resolution or local complications were observed.

Keywords:

Small intestinal neuroendocrine tumours (siNET), Midgut neuroendocrine tumours, Emergency surgery, Elective surgery, Oncological outcomes, Carcinoid syndrome.