P-12:
Ovarian Metastasis from Midgut Neuroendocrine Tumors: Incidence, Clinical Implications, and Management Options—An Update

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BACKGROUND: Midgut neuroendocrine tumors (NETs) are rare malignancies that can produce carcinoid syndrome and/or carcinoid heart disease. The incidence of ovarian metastasis, their clinical implications, and the optimal management strategy for these metastasis have not been well studied. We hypothesized that patients with ovarian metastasis will have a high incidence of carcinoid syndrome and carcinoid heart disease.

METHODS: Charts of 431 female patients seen in our NET clinic between October 2006 and December 2014 with a diagnosis of midgut NET were reviewed. Patients who had a previous bilateral oophorectomy with or without total abdominal hysterectomy were excluded. The incidence of ovarian metastasis, carcinoid syndrome and carcinoid heart disease was calculated. Median survival and 5-year survival rates were determined via the Kaplan-Meier Method.

RESULTS: Forty-one (41/431, 10%) patients were found to have ovarian metastasis. Twenty-four (24/41, 59%) patients exhibited carcinoid syndrome and three (3/24, 13%) patients with carcinoid syndrome developed carcinoid-related heart disease. 5-year survival rates for the patients with and without ovarian metastasis were 92% and 87%, respectively.
CONCLUSION: Ovarian metastasis was found in 10% patients with metastatic midgut NET. Fifty-nine percent of these patients exhibited carcinoid syndrome and thirteen percent of which developed carcinoid heart disease, in spite of aggressive somatostatin analog therapy. To improve quality of life, routine therapeutic or prophylactic oophorectomy is recommended for female patients undergoing cytoreductive surgery for their midgut NET, especially for those who are peri- or post-menopausal.