Multidisciplinary Reference Centers: A Beneficial Approach for Neuroendocrine Tumor Disease Management

Simron Singh, Yael Fineberg, and Calvin Law

Toronto Sunnybrook Odette Cancer Center, University of Toronto, Toronto, Ontario, Canada

Background: Neuroendocrine tumors (NET) can be challenging to diagnose and treat as they are a heterogeneous and complex group of malignancies that are uncommon and poorly understood. Treatment of patients with NET in a multidisciplinary reference center (MRC) may improve clinical outcome by integrating expert care from multiple specialties, reducing delays in treatments and referrals, facilitating clinical trial enrollment, and improving patient satisfaction. Although improved outcomes in ovarian, breast, and lung cancers have been achieved with the MRC approach, MRCs focusing on NET are uncommon.

Methods: A PubMed (Medline) literature search was performed to assess the experience and potential benefits of NET MRCs.

Results: A single-center analysis of treatment patterns and survival of patients with metastatic NET managed by a medical oncology unit (MOU; a MRC surrogate) [n=28] compared with patients managed by individual specialists (n=21) demonstrated that MOU patients had better disease monitoring, increased likelihood of chemotherapy (7% vs 0%) and octreotide LAR (79% vs 10%) treatments, were frequently enrolled in clinical trials (7% vs 0%), and achieved a longer overall survival (112 vs 32 months). In a single-center analysis of 146 patients with metastatic intestinal NET treated with multidisciplinary care, median and 5-year survival was 103 months and 75%, respectively, which represents a favorable outcome from multidisciplinary care. In 2007, the US National Cancer Institute determined regional MRCs with experienced clinicians were needed. Recently, NCCN and NANETS guidelines stated that effective NET diagnosis requires collaboration between specialists and that a multidisciplinary approach to treatment can lead to improvement in the patient’s quality of life, survival, and a positive outcome.
Conclusions: NET treatment in an MRC can improve patient outcome, including reducing the time between diagnosis and treatment and increasing patient survival time. Multidisciplinary treatment is recommended by recent treatment guidelines and should be a goal of healthcare systems.