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The Association Between Patient-Reported Symptom Burden and Urgent Healthcare Use in Patients Diagnosed with Neuroendocrine Tumors

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BACKGROUND

Patients with neuroendocrine tumors (NETs) have high burden of symptoms that persists over years after diagnosis. Patient-reported outcomes (PROs) are routinely screened for in oncology practice but seldomly used to trigger interventions. Further information about how PROs are linked to outcomes is necessary to improve their use for symptom management for NETs. We examined the association between PROs symptom burden and urgent healthcare use after NET diagnosis.

METHODS

We conducted a population-based study of adults with NETs (2010-2019). Symptom burden was captured using routine Edmonton Symptom Assessment System (ESAS) scores within 2 years of diagnosis. Logistic regression models determined the association between ESAS scores and subsequent 14-day urgent healthcare use (emergency department visit and/or urgent hospital admission), with generalized estimating equations to account for patient-level clustering.

RESULTS

4,278 patients completed 19,612 ESAS assessments. Each 1-point increment in drowsiness (OR 1.03, 95%CI 1.00-1.07), lack of appetite (OR 1.09, 95%CI 1.06-1.12), pain (OR 1.08, 95%CI 1.05-1.11), and poor wellbeing (OR 1.05, 95%CI 1.01-1.09) individual symptom scores were associated with higher urgent healthcare use, after adjusting for relevant covariates. We computed a global ESAS score using the highest individual symptom score (high-ESAS) for each assessment. Each 1-point increase in high-ESAS was associated with 21% increase in the odds of urgent healthcare use (OR 1.21, 95%CI 1.18-1.24). When used as categorical variable, patients with moderate (score 4-6) and severe score 7-10) high-ESAS had increased odds of urgent healthcare use compared to those with mild high-ESAS, with OR 1.78 (95%CI 1.48-2.13) and 3.33 (95%CI 2.80-4.00), respectively.

CONCLUSIONS

ESAS scores are associated with subsequent short-term urgent healthcare use after a NET diagnosis. This indicates a potential gap in managing outpatient patient-reported symptoms. Routine monitoring of ESAS scores should be leveraged to identify patients at high-risk of urgent healthcare use in need for better symptom management.

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