

The psychological impact of COVID-19 pandemic on patients with NETs: between resilience and vulnerability

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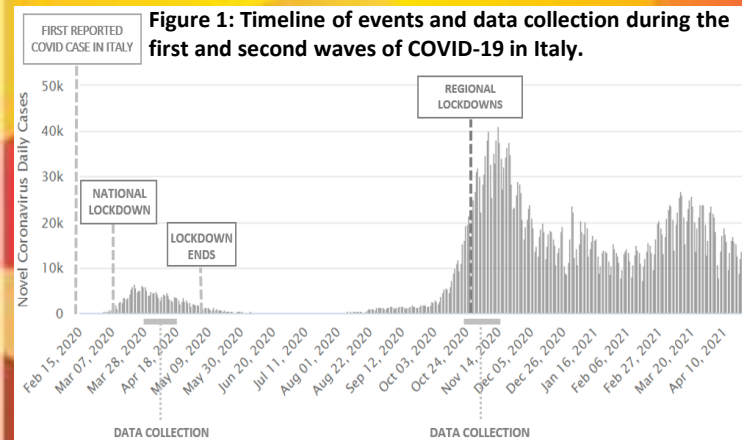
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BACKGROUND

The **COVID-19** pandemic has dramatically changed the lifestyle and quality of life (QoL) of the global population. Little is known regarding the psychological impact of COVID-19 in patients with gastroenteropancreatic (GEP) or bronchopulmonary (BP) NETs.

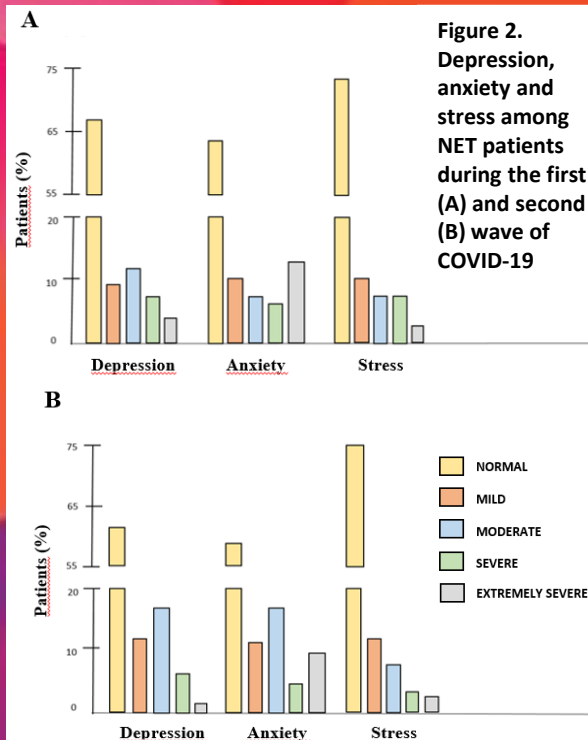
Figure 1: Timeline of events and data collection during the first and second waves of COVID-19 in Italy.



METHODS

We longitudinally surveyed the mental symptoms and concerns of NET patients during the plateau phase of the first (W1) and second epidemic waves (W2) in Italy (**Figure 1**). Seven specific constructs (depression, anxiety, stress, health-related quality of life, NET-related quality of life, patient-physician relationship, psychological distress) were investigated by using validated screening instruments including the DASS-21, the EORTC QLQ-C30, the EORTC QLQ GI.NET21, the PDRQ9 and the IES-R

The authors have no conflicts of interest to declare.



CONCLUSIONS

NET patients have an increased risk of developing post-traumatic stress symptoms as a result of the COVID-19 pandemic. Specific screening measures and psychological interventions should be implemented in NET clinics to prevent, recognize and treat mental distress in this vulnerable population.

RESULTS

We enrolled **197 patients** (98 males) with a median age of 62 years (G1/G2: 96%; pancreas: 29%; small bowel: 25%; active treatment: 38%). At W1, the prevalence of **depression, anxiety and stress** was **32%, 36% and 26%** respectively (**Figure 2**). The frequency of **depression and anxiety increased to 38% and 41% at W2**, while no modifications were recorded in the frequency of stress. Poor educational status was associated with higher levels of anxiety at both W1 (OR=1.33±0.22; p=0.07) and W2 (OR=1.45±0.26; p=0.03). An **improvement** of the **physical** (p=0.03) and **emotional** functioning domains (p=0.001) was observed over time. Both nausea/vomiting (p=0.0002), appetite (p=0.02), treatment-related symptoms (p=0.005), disease-related worries (p=0.0006) and sexual function (p=0.02) improved between W1 and W2, suggesting that NET patients were able to cope with the perturbations caused by the pandemic (**Figure 3**). Notably, **post-traumatic stress symptoms** were observed in the **58%** of the patients, and both single marital status (OR: 0.16, 95% CI, 0.06-0.48; p=0.0009) and low levels of formal education (OR: 0.47, 95% CI, 0.23-0.99; p=0.05) predicted their occurrence. High patient care satisfaction was documented despite the changes in health systems resources.

Figure 3 – Effects of COVID-19 pandemic on clinically significant HRQoL changes between W1 and W2.

