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Neuro-endocrine neoplasms (NENs): The necessity of a multidisciplinary approach for achieving best clinical outcomes

Editorial

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NENs comprise a wide group of tumours with different histological, biological and clinical characteristics. These types of tumours arise from the neuroendocrine cells throughout the body, affecting almost all tissues[1]. The incidence of these neoplasms is ~6 per 100000 cases in a year and there is an increase in recent years, due to the improvement of diagnostic tests[2]. Novel diagnostic techniques, such as functional imaging and combination of positron emission tomography with magnetic resonance imaging (PET/MRI), are becoming the gold standard for diagnosing the disease[3]. Somatostatin receptors are expressed in many cases of well-differentiated neuroendocrine tumours (NETs), so novel nuclear medicine techniques, such as imaging with [68Ga]-DOTA-peptides, can be used not only for the diagnosis, but also for peptide-receptor radionuclide therapy (PRRT)[4].

NENs are usually presented with mild clinical course in the majority of cases, growing slowly and presenting high survival rates. However, the development of distant metastases, often affecting the liver, is sometimes a common problem in the course of the disease. High grade NETs are called neuroendocrine carcinomas (NECs) [5]. The tumour grading system comprises 3 distinct categories (G1, G2 and G3), with the latter being the most aggressive, referring to a proliferating index (Ki67) > 20%[6].

Several therapeutic strategies are used in the different stages and grades of neuroendocrine neoplasms. A proportion of these neoplasms are diagnosed at early stages, so surgical excision by dedicated surgeons is of great importance. Moreover, the precise diagnosis of neuroendocrine neoplasms is critical for the management of the disease[7]. The clinical behavior of NETs and NECs is completely different, so the therapeutic approaches to these entities are also different.

For G1 and G2 NETs, the main treatment approach comprises of somatostatin analogues (SSAs). These drugs carry some important characteristics, like efficient antiproliferative activity, inhibition of hormone production by these tumours and a favorable safety profile[8]. Other therapeutic approaches include mTOR inhibitors, anti-angiogenic TKI inhibitors and PRRT. For G3 NETs, cytotoxic chemotherapy is the mainstay of treatment, including alkylating agents, antimetabolites, platinum salts and topoisomerase inhibitors[2,9]. Prognosis of these neoplasms depends on the tissue of origin (e.g., lung, pancreas, gastrointestinal tract) and the tumour grade[6].

It is clear that many different specialties are needed to achieve best treatment results and to improve the quality of life in patients with NENs, so the multidisciplinary teams provided by centres of excellence are of great importance for the best management of these neoplasms[10]. The significant impact of a multidisciplinary approach in the management of NENs, and particularly in achieving best clinical outcomes for these patients, is very well recognized worldwide.

In the present issue, there are two interesting articles about neuroendocrine tumours and their management. More specifically, a single-centre experience in the management of gastrointestinal neuroendocrine tumours[11], and also a rare case of a retroperitoneal pararenal dedifferentiated liposarcoma with epithelioid/neuroendocrine features[12], are discussed in this issue. There are also other articles about many tumour types covering a wide area in the field of Medical Oncology.

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