

influence the course of some autoimmune diseases, either by acting as a trigger factor at onset or by participating in symptoms relapse. A relapsing-remitting course during infections has been previously reported in other autoimmune neuropathies, in relation to several possible mechanisms: nerve conduction abnormalities due to the induction of cytokine release by viral infection, the development of a direct viral neuritis, or an aggravation of sodium channel dysfunction at the level of the nodes of Ranvier. Further studies are needed to clarify these findings.

#### TRANSLATION OF PACLITAXEL-INDUCED PERIPHERAL NEUROTOXICITY FROM MICE TO PATIENTS: THE IMPORTANCE OF MODEL SELECTION

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Paclitaxel-Induced Peripheral Neurotoxicity (PIPEN) is a potentially dose-limiting side effect in anticancer chemotherapy. Several rodent models have been proposed to reproduce PIPEN, but their results are sometimes difficult to be translated into the clinical setting. We compared with an extensive multimodal approach two widely used PIPEN models characterized by marked differences in their experimental design.

For the experiment, female C57BL/6JOLaHsd mice were treated only with paclitaxel vehicle (n. = 38), paclitaxel via intravenous injection (n. = 19, 70 mg/kg) once a week for 4 weeks (Study 1) or intraperitoneally (n. = 19, 10 mg/kg) every 2 days for 7 times (Study 2). At the end of treatment and after a 4-week follow-up period, mice underwent behavioral and neurophysiological assessments of PIPEN. At the same time points part of the mice were sacrificed and dorsal root ganglia, skin, sciatic and caudal nerves samples were collected for pathological examination. Serum neurofilament light (Nfl) levels were also measured. The differences in the neurotoxicity parameters were analyzed using a nonparametric Mann-Whitney test, with significance level set at p<0.05.

Study 1 showed significant and consistent behavioral, neurophysiological, pathological and serological changes induced by paclitaxel administration at the end of treatment, and most of these changes were still evident after the follow-up period. By contrast, the Study 2 evidenced only a transient small fiber neuropathy, associated with neuropathic pain.

Our comparative study clearly distinguished between a PIPEN model that very closely reproduce all the clinical features of the human condition, and a model showing only a small fiber neuropathy with neuropathic pain induced by paclitaxel.

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#### USEFULNESS OF AUTONOMIC TESTING IN CLINICAL PRACTICE: THE EXPERIENCE OF TRIESTE

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**Background:** Autonomic testing is a simple and non-invasive method to evaluate the function of Autonomic Nervous System (ANS), although not often used. Aim of this study was to examine our case history in order to evaluate its real diagnostic contribution in the clinical setting.

**Methods:** The autonomic testing protocol, performed in our neurophysiology clinics, consists in three tests to evaluate the Parasympathetic function: 30.15 (immediate standing), Deep Breathing and Valsalva Ratio; two tests to evaluate Adrenergic Sympathetic function: Standing Blood Pressure (BP) and Sustained Handgrip BP; and the Sympathetic Skin Response test (SSR) to evaluate the Cholinergic Sympathetic function. We collected the autonomic exams performed in our clinic from March 2021 to December 2023 and divided the clinical questions into three macro-categories: Parkinsonism or suspected MSA (multiple system atrophy), suspected Small Fiber Neuropathy (SFN) and Syncope / loss of consciousness (LOC) of undefined diagnosis.

**Results:** A sample of 36 adult patients (17 males and 19 females; average age 57 years) were considered. A selective alteration of the Parasympathetic ANS (73% of cases) was found in the 11 patients with Parkinsonism or suspected MSA. In the 5 patients with suspected SFN, alterations in the adrenergic ANS were detected in 60% of cases and only in one case also in the cholinergic ANS. Finally in the 20 patients with Syncope or LOC, the Parasympathetic ANS was found to be the most affected by alterations (50% of cases).

**Conclusions:** Our data confirm the relevant information provided by Autonomic Testing in the diagnostic process of selected patients.

#### GUILLAIN-BARRÉ SYNDROME: IS ELECTROPHYSIOLOGICAL SUBTYPE CLASSIFICATION USEFUL IN THE CLINICAL MANAGEMENT?

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Current European guidelines on Guillain-Barré Syndrome (GBS) advise supporting the diagnosis with neurophysiological techniques, but state that electrodiagnostic partition into acute inflammatory demyelinating