Peripheral nerve disorders

**EP1157**

**Adult polyglucosan body disease: clinical and histological heterogeneity of an Italian family**

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**Introduction:** Adult Polyglucosan Body Disease (APBD) is a rare autosomal recessive leukodystrophy due to mutations of glycogen branching enzyme gene (GBE1), leading to accumulation of polyglucosan bodies (PB) in central and peripheral nervous system. The disease mainly affects the Ashkenazi Jewish descent.

**Methods:** Three siblings from a non-Jewish Italian family, affected with APBD.

**Results:** The proband, a 57-years-old man, presented with progressive distal paresthesia at the age of 55 years. A sensory-motor demyelinating neuropathy was diagnosed at nerve conduction study (NCS). Subsequently, gait ataxia and urinary urgency were reported. His sister, now aged 56 years, has been showing a slowly worsening paraparesis since the age of 52 years, complicated by neurogenic bladder in the last months. The youngest affected sister, aged 53 years, had a recent, transitory, episode of orthostatic vomiting and mild ataxia. The MRI of all subjects showed diffuse hyperintense infra- and supratentorial white matter abnormalities, with bulbar and spinal cord atrophy. In both sisters NCS was normal, whereas their muscle biopsies only showed non-specific alterations. In the proband, both muscle and nerve biopsies showed PB, which prompted molecular investigation for GBE1. All siblings were compound heterozygous for a previously described mutation (c.1604A>G), and a novel one (c.1064G>A).

**Conclusions:** We demonstrated that in a large APBD family, common clinical signs occurred together with “atypical” ones (demyelinating neuropathy/transient symptoms) featuring a peculiar intrafamilial variability. Indeed, PB detection at muscle/nerve biopsy correlates with NCS alteration, which makes the integration between peripheral and central nervous system findings necessary for a correct diagnosis.

**Disclosure:** Nothing to disclose

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**EP1158**

**Long-term prognosis and health-related quality of life (HRQol) in multifocal motor neuropathy (MMN)**

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**Introduction:** MMN evolves with asymmetric weakness, conduction blocks (CB), antibodies to glycolipid GM1. Purpose of our study was to assess if demographic, clinical, neurological variables could be useful to identify disease progression in MMN.

**Methods:** Forty-one Caucasian patients (34 males and 7 females, median age 47 years) were followed for median duration of 92 months (range 12-264). Eight patients (19.5%) had GM1 IgM antibodies at diagnosis, 36.5% became positive during study frame. UE tremor was observed in 60% of patients. Strength was assessed separately in UE, LE with Medical Research Council Scale (MRC), disability with Overall Disability Sum Score (ODSS) and Ranking scale. Effects of IVIg treatment on progression was included in analyses conducted at 1, 3, 5, 10, 15 years by separate Mann-Whitney U test and Wilcoxon matched pair test. Human leukocyte antigen (HLA) antigen distribution was compared between patients and 3,528 controls. Health-related quality of life (HRQol) was assessed using Short-Form Health Survey (SF-36).

**Results:** At 1 and 3 years, total MRC score and the subscore related to lower extremities significantly decreased (T=113; p=0.009 and T=70.5; p=0.002, respectively) without benefit from IVIg. At 10 years, overall MRC subscores significantly decreased (p=0.003 and 0.001). There were no significant differences between demographic features, number of definite CBs, disability outcome measures. Analysis of distribution of 9 selected HLA alleles with frequency > or = 15% either in patients or controls showed that DQB1*06 prevailed in anti GM1 positive MMN (p=0.02).

**Conclusions:** Our results provide evidence that MRC grading is reliable prognostic marker. The finding of HLA DQB1*06 prevalence in patients with detectable anti GM1 confirms that HLA locus contributes to immune response.

**Disclosure:** Nothing to disclose
EP1159

Prognostic factors and health-related quality of life (HRQol) in polyneuropathy with IgM antibodies to myelin associated glycoprotein (MAG)

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Introduction: Polyneuropathies with IgM antibodies to MAG are immunologically mediated disorders. Purpose of this cohort study was to assess effects on disease progression of demographic (age of onset/diagnosis, gender), clinical, neurophysiological variables.

Methods: Forty Caucasian patients (25 males, 15 females, median age 70.5 yrs) were followed for a median duration of 91 months (range 12-225). Median anti-MAG titer determined by ELISA was 17,452 U. Electrophysiological type of neuropathy (demyelinating, axonal or mixed), muscle strength, assessed with Medical Research Council Scale (MRC), disability, assessed with Overall Disability Sum Score (ODSS), Ranking scale, type of treatment, serum IgM level were included in the analyses. Worsening was considered significant if MRC difference between first and last examination was at least 12 points. Survival analysis with Cox regression model was performed. Human leukocyte antigen (HLA) antigen distribution was compared between patients and 3,528 controls. Health-related quality of life (HRQol) was assessed using Short-Form Health Survey (SF-36).

Results: Survival analysis showed that patients with higher IgM level (p=0.01), electrophysiological evidence of demyelinating damage (p = 0.05), absence of either immunomodulating, immunosuppressive treatments during disease course (p = 0.0021) had significantly higher risk of worsening. Analysis of distribution of 9 selected HLA alleles with frequency > or = 15% either in patients or controls showed that B44 and DRB1*07 prevailed significantly in patients (p = 0.004 and ≥0.03 respectively) Variations of clinical measures did not affect HRQol.

Conclusion: IgM level, electrophysiological type of neuropathy at onset could be considered prognostic markers in polyneuropathies with IgM antibodies to MAG. The finding of HLA B44 and DRB1*07 prevalence in patients could point possible association of anti-MAG antibody production with this molecule.

Disclosure: Nothing to disclose

EP1160

Morphological study of the human corneal sub-basal plexus using in vivo confocal microscopy in patients with symptomatic diabetic polyneuropathy compared to controls

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Introduction: Diabetic neuropathy (DN) is a common clinical condition. The currently recommended diagnostic tests have low sensitivity. With the advent of in vivo corneal confocal microscopy (CCM) it was observed a change in the innervation of the cornea in patients with DN.

Methods: We evaluated the characteristics of the innervation of the cornea through the in vivo MCC in 35 diabetic patients with symptomatic distal symmetric polyneuropathy (DSP), compared to 55 controls. We sought to determine a pattern of morphological changes between stages of DSP severity, comparing clinical, laboratory, and nerve conduction variables.

Results: Differences between control and diabetic groups were observed for the following variables: age (44.9±13.24 vs. 57.02±10.4, p - value <0.001), fiber density (29.7±10.2 vs. 16.6±10.2, p - value <0.001), number of fibers (4.76±1.30 vs. 3.14±1.63, p - value <0.001), number of Langerhans cells (4.64±8.05 vs 7.49±10.3, p - value =0.035), tortuosity (p - value <0.05) and thickness (p - value <0.05). Furthermore, inverse relationship was found between fiber density and age (p= value <0.01) and fiber density and clinical severity (p- value <0.05). Another highlight was a positive relationship between conduction velocity of peroneal nerve and fiber density (p-value <0.05). Furthermore, inverse relationship was found between fiber density and age (p-value <0.01) and fiber density and clinical severity (p-value <0.05). Another highlight was a positive relationship between conduction velocity of peroneal nerve and fiber density (p-value <0.05). Another highlight was a positive relationship between conduction velocity of peroneal nerve and fiber density (p-value <0.05).

Conclusions: MCC is a fast, non-invasive and reproducible method for the diagnosis and monitoring of diabetic DSP.

Disclosure: Nothing to disclose
EP1161
Modelling pathogenesis and treatment of Mitofusin 2 disease using patient-specific iPSCs

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Introduction: Patients-derived human induced pluripotent stem cells (iPSCs) are a promising strategy for studying diseases mechanisms and therapeutic approaches, due to their potentiality to recapitulate disease features. Mitofusin 2 gene mutations are associated to a broad spectrum of human diseases in which Charcot Marie-Tooth disease-2A2 (CMT2A2), an hereditary axonal neuropathy with progressive distal muscle weakness, atrophy and sensitivity loss, is the most frequent phenotype. Mitofusin 2 encodes a protein responsible for mitochondrial outer membrane fusion. The mechanism of neuron loss and the role of mitochondrial dysfunction are poorly understood owing to the lack of an appropriate human model system and no effective treatment is still available.

Methods: We generated iPSC lines derived from human skin fibroblasts of CMT2A2 patients with viral vectors, capable of expressing the four Yamanaka factors and with a non-viral episomal iPSC reprogramming plasmids. iPSCs were differentiated using a protocol to promote neuronal phenotype. The phenotype of these cells was analyzed by morphological, functional, gene expression, and protein analysis.

Results: Patient-derived cells show no morphological and replication features modifications compared to WT cells. We observed perturbation in mitochondrial organization, suggesting that this is a key mechanism of CMT pathogenesis. Indeed, biochemical analysis demonstrated a reduction in the respiratory chain. Furthermore, CMT2A-iPSCs were used to test candidate therapeutic strategies. In particular, we evaluated a possible shRNA strategy, to reduce MFN2 protein.

Conclusions: The present study demonstrates that iPSCs can be an essential tool in the understanding of human Mitofusin 2 pathogenesis and to test possible new treatments.

Disclosure: Nothing to disclose

EP1162
Churg Strauss syndrome neuropathy: characterization from a retrospective series of 700 biopsies

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Objectives: Although Churg Strauss syndrome CSS is frequently complicated with peripheral neuropathy, few cases of CSS with examination of the peripheral nerve biopsy have been published.

Methods: Biopsy specimens were selected from over 700 sural nerve biopsies performed at the Section of Neurology, Neurological Clinic of Athens University Hospital, from 1991-2011. A total of 71 biopsies fulfilled the pathological criteria for vasculitis. 22 cases were diagnosed as non-systemic vasculitis. 49 cases were considered as systemic vasculitis and 9 cases of these were diagnosed as CSS, according to the criteria of the American College of Rheumatology. Clinical, electrophysiological, histopathological and morphometrical features of were obtained retrospectively from medical files.

Results: Nine out of 700 biopsies (1.3% of all biopsies) performed in our laboratory were diagnosed as CSS. The pathological features were vasculitis with predominant axonal degeneration and a varying pattern of myelinated fiber loss. The vasculitic changes were found mainly in small epineural blood vessels. Mononeuritis multiplex and distal symmetrical and asymmetrical sensorimotor neuropathy, were equally frequent. Asthma was the most frequently observed manifestation. Hypereosinophilia (>10%) was the main biological feature of CSS. The number of male and female was equally distributed in our study.

Conclusions: This retrospective study confirms that diagnosis of polyneuropathy is based on clinical and electrophysiologic studies, but precise immunohistochemistry and morphometric study of the peripheral nerve biopsy may be decisive in establishing the diagnosis. Although CSS is rare, it is important to recognize it, because remission depends on immunosuppressive therapy introduced in the early stage.

Disclosure: Nothing to disclose
EP1163
Genotypic and phenotypic presentation of TTR-FAP in Turkey

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Introduction: Transthyretin-related familial amyloid polyneuropathy (TTR-FAP) is an autosomal dominant disorder caused by mutations of the transthyretin (TTR) gene. More than 100 different mutations of the transthyretin gene were identified worldwide, but still the first described Val30Met is the most common one. The mutant amyloidogenic transthyretin protein causes systemic accumulation of amyloid fibrils that results in organ dysfunction and death. TTR-associated FAP is a progressive and fatal disease if left untreated and should be considered in the differential diagnosis of any patient with a progressive polyneuropathy, especially with an accompanying autonomic involvement.

Methods: We studied clinical, electrophysiological, histopathological, and genetic characteristics in 14 Turkish patients (4 female, 10 male) from 9 families with polyneuropathy and mutations in TTR.

Results: Mean age of onset was 43.6±13.3 years (between 21-66 years). 9 of them were late-onset TTR-FAP. At onset, all the patients exhibited sensory loss of the lower and upper limbs, three patients also experienced severe autonomic symptoms. 5 patients had autonomic nervous system manifestations, and nine demonstrated evidence of amyloid cardiomyopathy, 2 of them had renal involvement. 5 patients (4 male) had carpal tunnel syndrome. 1 patient with Gly53Glu mutation showed episodes of dysarthria and hemiparesis which were already described to be associated with this genotype. 4 patients died during follow-up due to the systemic involvement. Sequence analysis of TTR gene revealed the presence of 6 different mutations (Val30Met [in 3 unrelated families], Glu89Gln, Gly53Glu, Glu74Gly, Gly47Glu, Glu109Gly).

Conclusions: Our study suggests that the TTR-FAP patients from Turkey exhibit a wide clinic and genetic heterogeneity.

Disclosure: Nothing to disclose

EP1164
Neuropathy in Tangier disease mimicking leprosy

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Introduction: Tangier disease (TD) is a rare autosomal recessive disorder of lipid metabolism resulting from mutations in the ABC1 gene, leading to decreased levels of plasma HDL. Peripheral neuropathy is present in about 50% of cases. We report a patient diagnosed with TD in which a leprosy neuropathy was first considered.

Methods: A 51-year-old man complained of weakness and numbness in the limbs. Neurological examination showed facial palsy, weakness and wasting in the four limbs, hyporeflexia and asymmetrical decrease in vibratory, touch and pain sensations in limbs. Pain and temperature anesthesia was found over a back hypopigmented skin lesion. He suffered from myocardial infarction at the age of 48, thrombocytopenia and spontaneous splenic rupture.

Results: Electromyography revealed bilateral facial palsy and a demyelinating sensorimotor polyneuropathy. Sural nerve biopsy showed onion bulb formation, macrophagic cells with foamy cytoplasm and dense bodies accumulation compatible with bacillary degeneration. Histiocytic cells with foamy cytoplasm surrounding capillaris in the dermis were seen in the skin biopsy. A diagnosis of leprosy neuropathy was considered and he was treated without neurological improvement. Six years later, during a diagnostic study of thrombocytopenia and splenomegaly in a brother, a lipid profile revealed very low HDL-C and LDL-C levels with low ApoA-1, that were later seen in other brothers, as well as in our patient, confirming TD diagnosis.

Conclusions: Peripheral neuropathy may be the presenting symptom in TD and may simulate leprosy neuropathy. We suggest that a lipid profile should be included in the screening of chronic demyelinating neuropathy.

Disclosure: Nothing to disclose
EP1165
Bochum ultrasound score versus clinical and electrophysiological parameters in distinguishing acute-onset chronic from acute inflammatory demyelinating polyneuropathy
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Introduction: We aimed to evaluate prospectively a recently introduced nerve ultrasound score (Bochum ultrasound score - BUS) (1) clinical and electrophysiological parameters in distinguishing sub-acute chronic (CIDP) from acute inflammatory demyelinating polyneuropathy (AIDP).

Methods: BUS, clinical [sensory symptoms or signs, bulbar palsy, autonomic nerve system (ANS) dysfunction, preceding infections and respiratory muscle involvement] and electrophysiological parameters (A-waves, sural nerve sparing pattern, sensory ratio >1) underwent prospective evaluation in a group of 10 patients (mean age 53.4,SD +/- 10.3, 6 women), who referred to our department between January 2012 and May 2013 with clinical presentation of sub-acute polyradiculoneuropathy.

Results: Sensitivity and specificity in distinguishing sub-acute CIDP from AIDP were as follows: BUS: 83.3%, 100%; sensory symptoms: 100%, 75%; lack of ANS dysfunction: 83.3%, 75%; lack of bulbar palsy 83.3 and 50%; lack of preceding infections 66.6% and 50%; lack of respiratory muscle weakness or need for mechanical ventilation 100% and 50%; negative sural sparing pattern: 100%, 50%; lack of sensory ratio >1 100% and 25%; presence of A-waves 33.3% and 25%.

Conclusions: BUS seems to have a comparable high sensitivity and specificity with certain clinical parameters (presence of sensory symptoms, lack of ANS dysfunction), but a higher sensitivity and specificity compared to electrophysiological parameters, in distinguishing sub-acute CIDP from AIDP.

References

Disclosure: Nothing to disclose

EP1166
Early and paradoxical worsening after rituximab infusion for anti-MAG neuropathy
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Introduction: A recent study demonstrated clinical benefit of rituximab in anti-MAG neuropathy on secondary endpoints (Léger 2013). Conversely, some authors report cases of worsening after rituximab infusion (Stork 2013, Broglio 2005, Gironi 2006). Here we report two cases of neurological worsening after the third (out of four) weekly infusion of rituximab (375mg/m²).

Case report: Both patients had a typical chronic, distal, predominantly sensory impairment with ataxia. Anti-MAG antibody titre was above 10,000 BTU and electrophysiological study (EDX) disclosed predominantly distal demyelinating abnormalities in both patients. Treatment by IVIG and/or plasma exchange was inefficient; neurological condition worsened with the occurrence of distal weakness in feet. Rituximab therapy was thus undertaken. In the days following the third infusion, both patients experienced worsening of neurological status. Patient 1 experienced an increase of his sensory signs with extension from the calves to the knees, appearance of errors of position sense of big toes, and loss of 3 points on Norris score. Patient 2 experienced worsening of ataxia requiring a second aid for walking (+1 point in ONLS score), lower limbs distal weakness (-4 points MRC score) and an extension of sensory loss to fingers. EDX in Patient 2 confirmed worsening of demyelinating features. We discontinued immediately rituximab infusion and resumed treatment by IVIG which allowed improvement in patient 1 and stabilization in patient 2.

Conclusion: Rituximab treatment in anti-MAG neuropathy requires close monitoring to detect this paradoxical worsening. Further prospective analysis is necessary to identify pathogenic mechanisms and predisposing factors.

Disclosure: Nothing to disclose
EP1167

Teachings from the French database of TTR familial amyloid polyneuropathy (TTR-FAP): sporadic, genetic and phenotypic heterogeneity in late onset cases

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Introduction: TTR-FAP is progressive, disabling and life-threatening neuropathy due to a point mutation of TTR gene with autosomal dominant transmission. Median survival ranges from 7 to 12 y after onset. France is considered as a prototype of non endemic country. To study the impact of labeling French reference center for FAP (NNERF) and building of a national network.

Methods: In 1986-2013 period, 460 FAP patients were registered in NNERF’s database. All carried amyloidogenic TTR gene mutations and Congo positive amyloid deposit (CPAD). We report genotypic characteristics in all database and the phenotypic varieties of FAP in France in 2008-2013 period.

Results: TTR-FAP are actually identified in 80/100 geographical departments. Ethnical origin: French-56%, Portugese-34%, other-10%. 41 TTR mutations identified: Met30-60%, Tyr77-12%, Phe77-6%, Val107-5%, Ile122-2%; 22 variants TTR in single cases. In 2008-2013 period: 158 new cases, mean age 59y (22-89), Portuguese origin 21%, positive family history of FAP 52%, walking with aid 38%, a late onset (≥50 y) in 69% including 22% older than 70y. Diagnosis of FAP was delayed by 3y (0.2-13.5) after first symptoms. Two phenotypes were common in all origins: Small Fiber Length-Dependent PNP (20%) and Autonomic NP (16%). Four new phenotypes: All-Fiber SM-PNP (16%), Upper Limbs NP (17%), Ataxic NP (12%), Motor NP (0.7%). CPAD after nerve biopsy in 18/24pts (75%), LSGB in 78/111 pts (70%); 76% required multiple biopsies.

Conclusions: A better knowledge of the phenotypes of FAP and the larger use of TTR gene analysis in idiopathic aggressive polyneuropathy cases will help to accelerate diagnosis of TTR-FAP.

Disclosure: Nothing to disclose

EP1168

Anti-sulfatide IgM antibodies in peripheral neuropathy: to test or not to test?

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Introduction: Anti-sulfatide IgM antibodies have been associated with different neuropathies and were variably associated with serum IgM monoclonal gammopathy and antibodies to the myelin-associated glycoprotein (MAG). This heterogeneous association has induced some skepticism on the pathogenetic relevance of this reactivity.

Methods: We reviewed the clinical association of anti-sulfatide IgM antibodies in 570 patients with neuropathy and related disorders examined in our institution since 2004. Anti-sulfatide antibodies were measure by ELISA at the initial serum dilution of 1:32,000 and titrated by serial twofold dilution. Patients were also tested for anti-MAG IgM antibodies by Western blot.

Results: High titer of anti-sulfatide IgM (1:32,000 or more) were found in 39 patients, including 19 with titers up to 1:64,000, and 20 with titers of 1:128,000 or more. In 33/39 positive patients (85%) anti-MAG IgM were also found. In these patients the neuropathy had the features of neuropathy associated with anti-MAG antibodies. Six patients did not have anti-MAG antibodies. Five of them had moderately increased anti-sulfatide titers (up to 1:64,000) that were associated with various neuropathies including a chronic sensory axonal neuropathy associated with IgG monoclonal gammopathy, POEMS syndrome, transtiretin neuropathy, asymptomatic neuropathy and paraneoplastic sensory neuropathy. One patient with a demyelinating neuropathy associated with IgM monoclonal gammopathy had markedly increased antibodies (1:256,000).

Conclusions: Anti-sulfatide IgM antibodies are not infrequent in patients with neuropathy but are often associated with anti-MAG reactivity. A selective reactivity to sulfatide is rarely found and is associated with different forms of neuropathy raising some doubts on their diagnostic relevance.

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EP1169
Distal polyneuropathy as initial manifestation of sporadic Creutzfeldt-Jakob disease: early sural biopsy findings
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Introduction: The co-existence of central nervous system (CNS) and peripheral nervous system (PNS) involvement in Creutzfeldt-Jakob disease (CJD) has been reported in only few previous cases.
Case report: A 67-year-old man with stocking-like hypoesthesia, loss of vibration sense, ataxic gait was suspected of polynueuropathy. Standard cerebrospinal fluid (CSF) analyses were negative. Electromyography suggested an axonal-demyelinating distal neuropathy. Motor and sensory evoked potentials were pathological, whereas spinal cord MRI was normal. The patient received a cycle of iv Methylprednisolone without any benefit.
Sural nerve biopsy [fig. 1] showed the coexistence of both demyelinating and axonal pathology with marked fiber loss, occasional onion bulbs, predominantly axonal damage [fig. 2] at teasing examination. The ultrastructural analysis of the sural nerve showed predominant axonal pathology [fig. 3]. The patient’s gait ataxia markedly worsened and spasticity, bradykinesia, resting tremor, limb rigidity, hypophonia and memory impairment became evident with bilaterally positive Babinski signs. The diagnosis of CJD was suggested by brain MRI scan, although electroencephalography was atypical. CSF examination showed marked 14-3-3 positivity, and tau was increased. The patient died 11 months after disease onset. On autopsy, histological analysis of the brain confirmed the diagnosis. Immunohistochemistry for PrPsc revealed kuru-like amyloid plaques in the cerebellum. A complete analysis of the PRNP gene was negative for known mutations. The CJD subtype of this patient was MV2.
Conclusions: Our case underscores that the PNS can be involved early in sCJD. Clinical and pathological similarities among the reported cases of sCJD with ataxia and sensory polynueuropathy are discussed.

Disclosure: Nothing to disclose
**EP1170**

Combined skin biopsy and neurophysiological study in TTR-amyloidosis allows early detection of small fiber neuropathy

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**Introduction:** Small-fiber neuropathy (SFN) is most frequent and early manifestation of transthyretin familial amyloid polyneuropathy (TTR-FAP). Evaluation of the value of intraepidermal nerve fibers density (IENFD) by skin biopsy and neurophysiological investigation of small nerve fibers to detect SFN in TTR-FAP.

**Methods:** We evaluated 11 patients with clinical polyneuropathy (7M/4W; 40-75 ys) and 9 asymptomatic carriers (4M/5W; 30-56 ys) with 5 types of pathogenic ATTR-variants: V30M (n=16), V28M (n=1), S77T (n=1), S77P (n=1) and T49I (n=1). Skin biopsies performed at thigh (proximal) and leg (distal); IENFD measured after immunofluorescence staining of PGP9.5 in nerve terminals. Lower limit of normal values were 12.8 f/mm at thigh and 7.6 at leg (Devigili et al, 2008). Congo red staining was performed to detect amyloid deposits. Neurophysiological investigation including laser evoked potentials (LEP), quantitative sensory testing (QST), sympathetic skin response (SSR) and heart-rate variability (HRV).

**Results:** In 11 patients with overt neuropathy, skin biopsy evidenced SFN, with proximal IENFD (mean±SD) at 4.3±3.9 f/mm, distal IENFD at 2.3±1.6 f/mm. Neurophysiological investigation showed abnormal LEP (n=9), QST (n=6), SSR (n=6), and HRV (n=8). In 9 asymptomatic carriers, proximal IENFD was decreased in 9/9 at 7.1±4.3 f/mm, and distal IENFD in 6/9 at 3.8±1.9 f/mm. Neurophysiological investigation showed abnormal LEP (n=4), QST (n=0), SSR (n=2), and HRV (n=3). Finally, congo stain disclosed amyloid deposits in 6/11 patients, 1/9 carriers in skin biopsy.

**Conclusions:** This pilot study showed that a combined approach may detect TTR-FAP at a presymptomatic stage and therefore identify potential candidates for innovative therapeutic strategies.

**Disclosure:** Nothing to disclose

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**EP1171**

Bortezomib - New option for chronic inflammatory demyelinating polyradiculoneuritis (CIDP)

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**Introduction:** CIDP is an acquired, immune-mediated disorder that is progressive or relapsing over a period of at least 8 weeks. CIDP is thought to be mediated by both cellular and humoral immune reactions directed against the peripheral nerve myelin or axon. Only three treatment regimens for CIDP have demonstrated benefit in randomized, controlled studies: corticosteroids, plasma exchange, and intravenous immunoglobulins (IVIg). Approximately 25% of patients respond inadequately to corticosteroids, plasma exchange or IVIg. We aimed to evaluate bortezomib as a new treatment option in CIDP patients aiming at immune cells with high metabolism.

**Methods:** 6 patients with CIDP were consecutively treated with bortezomib. The patients failed to standard and escalating treatments and had an excessively high need of IVIg. Subjects were neurologically and neurophysiologically examined every three months after a series of 4 bortezomib injections (1.3mg/m²), accompanied by antibiotic and virustatic protection for 4 weeks.

**Results:** Subject had an INCAT-Score (Inflammatory Neuropathy Cause and Treatment Scale) between 2-10 prior to bortezomib. Meanwhile three patients were examined. In these three patients the INCAT-Score and the nerve conduction velocity studies remain stable. Electromyography in two patients showed reinnervation in musculus brachioradialis and musculus interosseous dorsalis. No severe side effects occured.

**Conclusion:** Our case series is the first report of a positive effect of bortezomib in CIDP patients who failed standard treatment algorithms. Although preliminary our case series show promising results in CIDP patients with highly active disease course. Further research is needed to evaluated bortezomib’s effect in CIDP patients.

**Disclosure:** Nothing to disclose