

Good response in pain reduction with pathogenic oriented treatment in type 2 DM with multiple comorbidities: A case report

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Introduction: Alpha-lipoic is a strong antitoxic which inhibits accumulation of free oxygen radicals while benfothiamine inhibits pathways involved in developing neuropathy while stimulating pathways that play a role in improving neuropathy, such as the pentose-phosphate shunt. The rationale for the use of benfothiamine and alpha lipoic acids in neuropathic pain is to lag, halt or even reverse the progression of neural damage caused by hyperglycaemic metabolism.

Case presentation: A 66-year old female diagnosed with type 1 diabetes at the age of 43, complicated by stage II diabetic neuropathy, treated with Gabapentin 600mg once daily, mild non-proliferative retinopathy and chronic obliterative arteriopathy of the inferior limbs was admitted in our Centre for: elevated glycaemia levels (500mg/dl), nocturia, dizziness, cephalagia, and muscle pain in the posterior legs, exacerbated by effort. On admission: slight ataxic walking, overweight, dry skin and lipohypertrophy due to insulin therapy in the umbilical region. BP=147/69mmHg, Pulse= 76BPM. Lab tests showed mixed dyslipidemia, hypocalcaemia, mild thrombocytopenia, slightly elevated transaminases and poor glycemic control (HbA1c=10.35%). From day 1 i.m. benfothiamine + pyridoxine + cyanocobalamin (Neurossen®) and i.v. alpha-lipoic acid was administered with significant pain improvement (from 10 to 5 on VAS). Gabapentin was stopped due to confirmed patient history of atrioventricular block. Further pain improvement was obtained by adding duloxetine 30mg/day on the 4th day (from 5 to 1 on VAS). Adjustments in insulin were necessary in order to improve glycemic control.

Conclusions: Etiology of pain was plurifactorial: myopathic, arteriopathic and neuropathic. This case was of interest since it points out the possible efficacy of benfothiamine and lipoic acid. Pathogenic oriented treatment may significantly reduce pain symptoms in combination with typical neuropathic therapy and may be considered as cost-effective for patients who can't afford duloxetine as initial therapy.

Biography:

Agatha Mensah Achampong has completed her M. Pharm in pharmacovigilance, drug monitoring and safety at the age of 26 years from University of Medicine and Pharmacy in Cluj-Napoca. She is currently an intern in Clinical Pharmacy at the Diabetes Centre.