**Painful Neuropathy with Skin Denervation After Prolonged Use of Linezolid**

**Reference:**

**Scientific Literature Review**

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**Podiatric Relevance:**
With the increase in cases of MRSA and VRE, difficult infections can benefit from the use of linezolid for antibiotic coverage. This single case study shows the effects of linezolid on the small-diameter nerves causing painful neuropathy. The object of this study was to provide clinical and pathological evidence of reversible painful neuropathy to small-diameter sensory nerves caused by long-term use of linezolid.

**Methods:**
A case study of a 53-year-old healthy woman with history of left knee prosthesis was described in this article. Surgical debridement and intravenous antibiotics were used during short-term episodes of infection during the course of treatment, as well as the use of linezolid. During prolonged use of linezolid, over 6 continuous months, the patient developed a painful neuropathy (VAS =82). The patient was analyzed for small-diameter nerve injury with the use of sensory examination, nerve conduction studies, quantitative sensory test, and skin biopsy.

**Results:**
This is a case study of 53-year-old female patient with an infected left knee prosthesis that was treated with continuous prescription linezolid (600 mg q12h) for more than 6 months. The patient developed a painful neuropathy during the use of linezolid that subsided after 8 months (VAS = 0). Nerve conduction studies to the upper and lower extremities were all within normal limits. Quantitative sensory testing to the dorsum of the foot showed increased warm threshold (40.0 °C) at end of continuous linezolid treatment and a reduction to 36.3 °C eight months after linezolid therapy ended. Skin biopsy to the lateral right leg, taken 2 weeks after cessation of linezolid treatment, showed epidermal nerve density to be 2.32 fibers/mm (normal > 5.88 fibers/mm). The second skin biopsy showed improvement to 9.04 fibers/mm, indicative of complete reinnervation.

**Conclusions:**
Clinical and laboratory results prove that the long-term use of linezolid can cause a painful small-diameter neuropathy to the lower extremity. This case study shows that small-diameter nerve fiber neuropathy is a reversible side effect from the extended use of linezolid.