

Unveiling Disparities in AANHPI: Comprehensive Analysis of Etiology, Presentation and Treatment in Peripheral Neuropathy



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Background: Peripheral neuropathy encompasses a wide range of disorders with diverse causes, but consensus on its management is lacking, and research on its clinical presentation and treatment in AANHPI populations is limited. This study aims to identify etiological trends, clinical presentations, management practices, and associated comorbidities among AANHPI patients diagnosed with peripheral neuropathy.

Methods: A retrospective cohort study was conducted, and data was collected from patients diagnosed with peripheral neuropathy seen at Hawaii Pacific Neuroscience, a single outpatient neurological clinic. Sociodemographics, comorbidities, possible etiological factors, clinical presentations, and documented treatment plans were collected.

Results: This study included 310 patients, with 70.7% identified as AANHPI (39.4% NHPs and 31.3% Asians). Diabetic neuropathy (n=283) was the most common cause, followed by idiopathic, toxic, and paraneoplastic neuropathy. AANHPI patients had a higher prevalence of diabetic neuropathy ($p < 0.001$) and were diagnosed approximately five years earlier than other groups ($p < 0.001$). They also exhibited higher rates of obesity ($p < 0.001$) and multiple comorbidities ($p = 0.002$), including hypertension, type II diabetes, and a family history of diabetes (all $p < 0.001$). Additionally, AANHPI patients reported more frequent muscle weakness ($p = 0.013$) and numbness ($p = 0.018$), and were more likely to undergo multiple treatments ($p < 0.001$). Patients with diabetic neuropathy were notably more likely to receive physical therapy and multiple treatments ($p < 0.001$).

Conclusion: Diabetic neuropathy is the primary cause of peripheral neuropathy in AANHPI patients, who often have multiple comorbidities and exhibit muscle weakness and numbness. NHP patients tend to be diagnosed earlier than other groups. These findings highlight significant health disparities in the AANHPI population, emphasizing the need to improve prevention, treatment, and management to reduce complications and morbidities.