Complications Related to Harvesting Nerve Graft or Obtaining Nerve Biopsy

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**Introduction**
Harvesting nerve autograft or obtaining sensory nerve biopsy for diagnostic purposes is expected to cause permanent sensory deficits. In addition, donor site wound complications, neuroma pain and post-denervational paresthesia may follow, mandating additional treatments due to negative effect on patient’s quality of life. Systematic review is undertaken to define the incidence, healthcare cost-related sequela and available solutions for these complications.

**Objective**
To raise awareness about donor site morbidity with the autograft harvest or nerve biopsy and offer alternative solutions for nerve grafting, generating no donor site morbidity

**Methods**
Literature search of available Pub-Med English reported studies was undertaken to address the incidence of these complications, correlate cost and define alternative surgical options.

**Results**
- Sural nerve
  - the most common nerve autograft or biopsy donor
- Donor sites complication rates:
  - Chronic pain (>6 months) range from 11-40%
  - Pain symptoms may persist for about 5 years
  - Diabetic patients have greater risk for chronic post-operative pain (40%, up to 44 months)
  - Alloodynia present in 19% of patients
  - Dysesthesia ranged from 35%-47%
  - Wound Infections range from 9% to 18%
  - Wound dehiscence: 3% to 15%
- The extended operative time for autograft harvest ranges 30-75 min, with associated OR costs of $3200-$6500, and charges for prolonged stay, affected ambulation and pain management.

**Conclusions**
Donor site morbidity due to nerve autograft harvest or diagnostic biopsy may be associated with morbidity and costly complications. The awareness of such events should aid surgeon and patient when choosing nerve autograft vs allograft reconstruction. Newest technologies utilizing human allograft enable us to restore the original nerve continuity, thereby eliminating potential donor neuroma occurrences, sensory deficits and incisional problems. Number of clinical studies validated allograft values, yet further prospective studies are suggested to reinforce these evidence based-data.