Tinel Sign and Valleix sign

- Tinel’s Sign: Distal or proximal tingling on percussion with or without radiation of paresthesia along the sensory distribution.
- Valliex’s sign (Phenomenon): Proximal radiation of pain and paresthesia along the neuraxis on percussion at the point of nerve injury.

Distal paresthesia of nerve on nerve percussion was first discussed by German Physiologist Paul Hoffman in 1915. He stated that the tingling sensation is a sign neuronal regeneration after nerve injury. Later in the same year a French neurologist, Jules Tinel, described a “tingling sensations” or “formication sign” produced by slight percussion of a nerve trunk some time after injury. Tinel attributed the paresthesia to young neurons in the nerve regeneration process after injury.

The intensity of the percussion to elicit the Tinel sign should just be enough to elicit the radiating paresthesia without direct mechanical stimulation of the nerve. Tinel sign should not be painful thus associated pain on percussion is a sign of another pathophysiological insult to the said nerve. It is thought to be the result of decrease in action potential threshold of the regenerating nerve and thus a good prognosis for relief of pain and symptoms after nerve injury. Retrograde radiation of pain from a distal compression neuropathy is the hallmark of Valleix Phenomenon. Most often confused with Tinel sign but Valleix phenomenon has associated radiating pain. A Valliex point is any tender area along the course of the nerve which are mostly seen at the points where the nerve emerges from a bony canal or pierces a muscle or aponeurosis or the nerve branches out.

Both Tinel sign and Valliex phenomenon are useful in diagnosing peripheral nerve entrapment along the course of the nerve distribution. Most common entrapments are Carpel tunnel syndrome, Tarsal tunnel syndrome, Peroneal nerve entrapment along its course of distribution. Frank Urbano in “Tinel Sign and Phalen’s Maneuver” states Tinel’s sign is 25% - 75% sensitive and 70% -90% specific for diagnosing carpal tunnel.

Neuroanatomy of the foot:

![Image of foot neuroanatomy]