

# Puusepp's sign: a Babinski's sign equivalent

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## DESCRIPTION

Babinski's sign (extensor plantar response),<sup>1</sup> which is characterised by dorsiflexion of the great toe and variable fanning of the lateral four toes, is the prototype sign of upper motor neuron-type lesion. It is



**Video 1** Puusepp's sign—abduction of the little toe on plantar stimulation; without any movement of the great toe and brisk deep tendon reflexes at the knee.

elicited by stimulation of the lateral aspect of the sole with a blunt object. A large number of variations and modifications have been described in the literature for eliciting the extensor plantar response; the most useful ones being the Chaddock sign and the Oppenheim sign. All these methods concentrate on the initial movement of the great toe.

Puusepp's sign<sup>2</sup> was originally described by the Estonian neurologist Ludvig Puusepp. It is the tonic, slow abduction of the little toe on plantar stimulation and may be present when the great toe extension is absent (video 1). We demonstrate Puusepp's sign in a patient with compressive cervical myelopathy due to tuberculosis—Pott's spine and paravertebral abscess (figure 1), in whom the Babinski's sign was not elicitable even in the presence of other upper motor neuron signs like spasticity and brisk deep tendon reflexes. The importance of Puusepp's sign is that, although rarely recognised in clinical practice, it may be the only elicitable sign in certain patients with upper motor neuron type pathology and thus helps in establishing the clinical diagnosis. Thus, observing the little toe in addition to the great toe while stimulating the lateral aspect of the sole for Babinski's sign provides important clinical information.

## Learning points

- ▶ Puusepp's sign is the tonic, slow abduction movement of the little toe on stimulation of the lateral aspect of the sole with a blunt object.
- ▶ Clinical significance of Puusepp's sign arises in cases with upper motor neuron-type lesions and absent Babinski's sign; in which case it points to corticospinal tract pathology.

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**Figure 1** MRI T2-weighted sagittal image showing compressive cervical myelopathy at the C3–C4 level with destruction of the vertebral body—Pott's spine.



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