Inflammatory cytokines in CSF in bacterial meningitis: association with altered blood flow velocities in basal cerebral arteries


Tinel's sign of formication

Few signs have caused more controversy than the sign of Tinel.

Julius Tinel (1879–1952) was son of the professor of anatomy at Rouen. He worked with Dejerine, and became chief de clinique in 1911 and chief of the laboratory at Salpêtrière in 1913. He was very active with his son Jacques in the French resistance movement in the second world war, and was imprisoned in Bordeaux at Fort de Ha. His book Nerve Wounds records 67 patients with nerve injuries sustained in the first world war. He called his sign the sign of formication.

"The all important sign is formication. We find that sudden pressure or percussion of the nerve trunk, below the lesion, calls forth a tingling sensation in the cutaneous region of the nerve. . . It appears about the fourth or sixth week . . Then it gradually becomes more pronounced and it is possible to follow, week by week, in the course of the nerve, the progress of this provoked formication, pari passu with the advance of the axis cylinders. The formication sign is thus of supreme importance since it enables us to see whether the nerve is interrupted, or in the course of regeneration; whether a nerve suture has succeeded or failed, or whether regeneration is rapid and satisfactory, or reduced to a few significant fibres."

Tinel's sign fell into disrepute when a positive sign was elicited in a patient in whom it was shown that there was an anatomical gap at the site of nerve injury. The salient feature is "peripheral reference" of the tingling sensation on percussion of the nerve that occurs in normal nerves; but in a pathological nerve it is more easily provoked and may persist longer. It may be used to localise the site of injury and suggests the presence of regeneration. Now widely used in nerve entrapment syndromes, it remains as a "soft sign". Second world war experience proved that a negative Tinel's sign is of no diagnostic value.

The translation of the two papers of Paul Hoffman, published in the same year that Tinel wrote his article (1915) has caused some authorities to refer to the Hoffman-Tinel sign.

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