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### Organophosphate-induced Delayed Poly-neuropathy: What We See is Tip of the Iceberg

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Organophosphate-induced delayed polyneuropathy (OPIDP) is a relatively rare toxic effect of exposure to some organophosphorus (OP) compounds. The exact incidence of this complication is not known. Characteristic feature is the distal degeneration of axons of peripheral and central nervous systems that occur 1–4 weeks after single or short-term exposure to these esters.

OPIDP commonly follows exposure to OPCs with weak anticholinesterase activity. OPIDP usually sets in after a period of 7-21 days of exposure. The initial symptoms of OPIDP are muscle cramps especially in lower limbs along with numbness and paraesthesia followed by progressive weakness. It can cause foot drop, affect the hand grip by involvement of small muscles of the hands and result in gait /trunk ataxia due to trunk muscles involvement. Cranial nerves and the autonomic nervous system are usually not involved. In severe cases, quadriplegia may occur.

Weakness is slowly progressive over 2 weeks. Clinical involvement of the corticospinal tracts and the dorsal columns usually becomes apparent when the peripheral neuropathy improves. The prognosis of patients with mild neuropathy is good but those with severe neuropathy are usually left with persistent deficits.

Initial electrophysiological changes include reduced amplitude of compound muscle potential, increased distal latencies and normal or slightly reduced nerve conduction velocities. Over a few days, progression of disease may lead to non-excitability of the nerve with electro-myographic signs of denervation.

The frequency of OPINP is usually not addressed in clinical studies as the outcomes usually are in-hospital short term mortality and morbidity. Therefore it is difficult to exactly estimate the burden of disease. In a recent study conducted by authors, it was observed that patients may develop evidence of significant subclinical OPIND at 6 months which may be detectable only after nerve conduction studies are performed. Concluding that what we clinically observe may just be tip of an iceberg.