# Guillain-Barré Syndrome



*Synonym: acute inflammatory polyneuritis*

## Introduction

Peripheral demyelination and axonal degeneration, resulting in acute, ascending and progressive neuropathy. Characterised by weakness which may → respiratory failure, paraesthesiae, and hypo/areflexia. Sev autonomic dysfunction may also occur. Mort 2-5%. *Miller Fisher syndrome (MFS)* is a rare variant that presents with ataxia, ophthalmoplegia and areflexia with minimal weakness. Recovery usually <1-3 months. Campylobacter assoc.

## Epidemiology

Commonest acute neuromuscular paralytic syndrome. Annual incidence ~1-2/100,000 pop. M>F. Biphasic age peaks: 15-35y and 50-75y

*Risk Factors*

~75% have a recent history of usually GI or respiratory infection, e.g:

- *Campylobacter jejuni*
- *Mycoplasma pneumoniae*
- EBV
- Hepatitis B
- CMV
- HIV

Other risk factors include:

- Vaccinations - live and dead vaccines have been implicated
- Malignancies: e.g. lymphomas, especially Hodgkin's disease
- Pregnancy - incidence ↓in pregnancy but ↑in postpartum months

## Presentation

*Features*

- **Weakness:** Ascending, progressive & symmetric. Max sev @2wks & progression stops after 5wks. Facial weakness (Bell's palsy), dysphasia or dysarthria may develop.
- **Pain:** Neuropathic pain may develop, particularly in the legs. Also back pain.
- **Reflexes:** These may be reduced or absent.
- **Hypotonia**
- **Respiratory muscle paralysis**
- **Sensory:** Variable ascending symptoms & can include paraesthesiae and sensory loss.
- **Autonomic:** ↑HR, ↑BP, ↓sweating, ↓heat tolerance, paralytic ileus and urinary hesitancy.

## Investigations

Diagnosis usually clinical.

*Urine:* Osm & electrolytes (SIADH)

*Bloods:* UEC, Osm (SIADH). Serology - Campylobacter & antiganglioside antibodies.

*LP/CSF:* ↑Protein (may be delayed). WCC<10 (mostly monocytes).

*Spirometry*: FVC sensitive to respiratory dysfunction & helps assess for ICU/intubation

*Nerve conduction studies:* Measurable slowing of nerve conduction may take 2-3 weeks.

*MRI:* shows enhancement of affected nerves

*ECG:* May be normal or 2° & 3° AV block, T-wave changes, ST depression, QRS widening, etc.

## Management

- **Immunoglobulin** IV OR plasma exchange ↓recovery time by up to 50% - Cochrane r/v
- Supportive: 33% req intubation (VC<15ml/kg, PO2<70mmHg on RA, airway issues), Mx dysautonomia, DVT prophylaxis (TEDS/LMWH SC), analgesia for pain (**carbamazepine**, **gabapentin** may help). Steroids not beneficial.