

Clinical features associated with need for mechanical ventilation in children with Guillain Barre Syndrome

Study Question

Which clinical factors are associated with the need for mechanical ventilation in children with Guillain Barre syndrome (GBS)?

Study Design & Measures

Study Population:

All children, aged 1 month to 12 years old, diagnosed with GBS

UK Medical Research Council Grading:

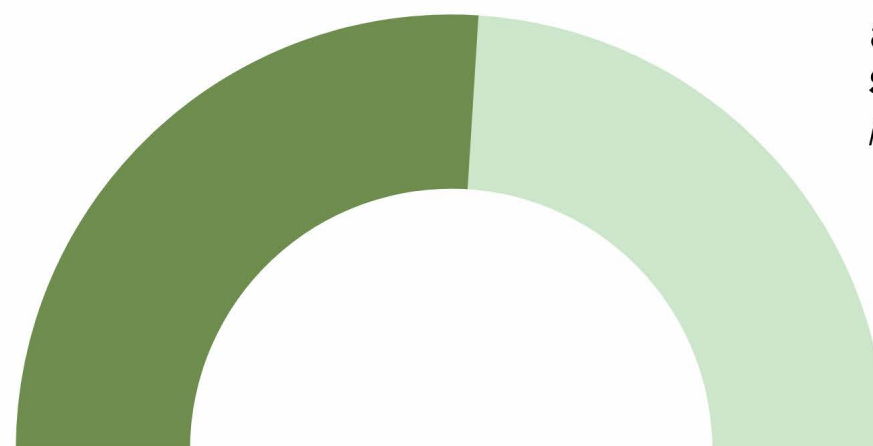
Grade 5: Muscle contracts normally against full resistance

Grade 4: Muscle strength is reduced, can still move joint against resistance

Grade 3: The joint can be moved only against gravity with the examiner's resistance completely removed

Grade 2: Muscle can move only if the resistance of gravity is removed

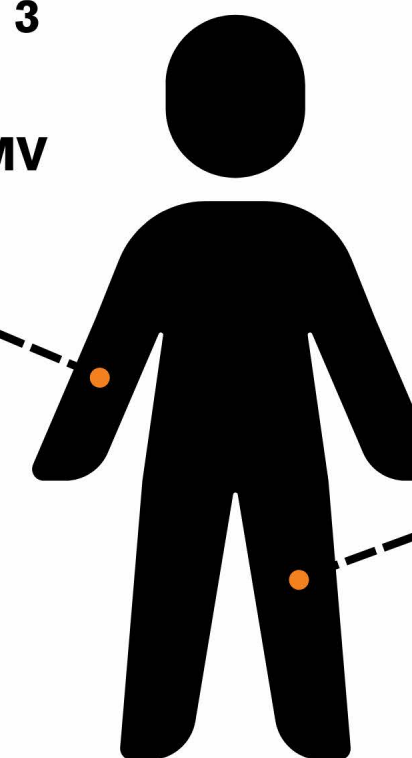
Grade 1: Only a trace or flicker of movement is seen or felt in the muscle or fasciculations are observed



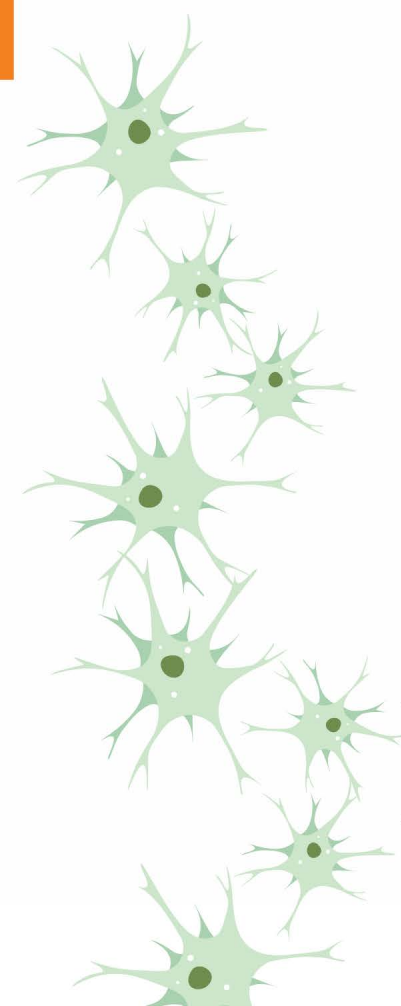
Ninety-nine (52%) children underwent invasive MV.

Median duration of MV was 25 (19, 37) days.

Upper limb power ≤ 3 on admission was associated with subsequent need for MV
 $p=0.037$, OR 3.5 (1.1-11.5)



Lower limb power ≤ 2 on admission was associated with subsequent need for MV
 $p=0.008$ OR 3.5 (1.4-8.9)



Cranial nerve palsy at admission was associated with subsequent need for mechanical ventilation.

$p=0.001$ OR 3.2 (1.6-6.1)

Cranial nerve palsies were present in 81 (42%) children.

Conclusion and Authors' Next Steps

Severe neuromuscular weakness at admission was associated with the need for mechanical ventilation

Greater severity of this NM weakness was associated with need for prolonged (>21 days) MV. Identification of these signs may help in prioritizing critical care needs and early PICU transfer.