Whittington Health NHS

Guillain-Barre Syndrome – Management

Subject:	Guillain-Barre syndrome
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Policy Executive Owner:	Dr C Murdoch, Clinical Director
Designation of Author:	Consultant Neurologist (Dr T Young)
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Target Audience:	Neurologists, Clinical Nutrition, SALT, ED staff
Key Words:	Guillain-Barre, neuromuscular paralysis

Diagnosis:

Guillain-Barre Syndrome presents with acute neuromuscular paralysis developing of one to several days. Remember that many patients present with back ache and muscular pains, and sensory signs may be subtle despite the pain and may be limited to loss of joint position sense. Tendon reflexes may be preserved early on the illness.

To confirm the diagnosis request:
Nerve conduction studies – may be normal in the first week or more and therefore clinical diagnosis supported by relevant imaging and LP is the initial key to diagnosis.
CSF examination if no contraindications– will usually show a raised protein after the first week.
Check ESR, WC, ANF, urinary prophyrins, CK to exclude other conditions.
Check stool for campylobacter and other pathogens
If CSF White cell count significantly raised consider HIV/Lyme as well

Differential *Diagnosis:*

Patients with a sensory level on the trunk must be considered to have a spinal cord lesion until proven otherwise.
Guillain-Barre Syndrome patients do not usually have a sensory level.
Weakness with facial involvement may be caused by brainstem infarction.
Other treatable but rare diagnoses – vasculitic neuropathy, diphtheria neuropathy, porphyria, heavy metal poisoning, Botulism (usually descending weakness).

Management:

Ventilatory function. Monitor using vital capacity-THIS SHOULD BE PERFORMED REGULARLY AND NURSING STAFF ADVISED ON CALLING A DOCTOR IF THE (Vital Capacity-cc/IKg) VCs ARE CLEARLY FALLING. It is easy to underestimate VC. Ensure the patient has adequate lip and nose seal. Peak flow meters are not an adequate substitute. Blood gases will remain normal until the patient is about to have a respiratory arrest. VC's should be monitored at least every 6 hours and 4 hourly or more frequently if

any concerns about the patient. Nursing staff and on-call teams should be informed about the importance of seeking help very promptly:

The patient should be monitored on HDU/ITU ***with urgent anaesthetic*** assessment for the need of intubation and mechanical ventilation if:
VC 1.5 litres, and falling
VC 1.5 litres, and fatigued
VC 1.5 litres, and has other bulbar signs
VC 1.0 litre
If concern despite higher VCs than these a discussion with anaesthetics would be sensible
Intubation should be oral, and depolarising agents should be avoided.
Tracheostomy should be strongly considered as soon as it becomes clear the patient will need more than a few days ventilation.

Autonomic function:

All patients who are bedbound or who have bulbar signs should have continuous ECG monitoring (autonomic dysfunction with arrhythmias is commonly seen). Many patients get severe constipation and ileus which may mimic an acute abdomen. This risk of this occurring may be minimised by ensuring adequate fluid intake and the use of aperients and, if necessary, enemas.

DVT Prophylaxis:

Immobile patients should be given DVT prophylaxis-IVIG also predisposes to thrombosis.

Pain:

Many patients complain of severe pain. This may be musculoskeletal or neurogenic. Musculoskeletal pain is best managed with careful bed positioning, repeated changes in posture (a pressure relieving mattress alone is inadequate), physiotherapy input and standard analgesics. Neurogenic pain may be managed with Gabapentin or Pregabalin or Amitriptyline.

Contractures

The long term outlook from GBS is dependent to some extent on preventing contracture. Patients need careful positioning, intermittent splinting of the

wrists, fingers and ankles, and passive full range joint movements. Regular Physiotherapy input is sensible.

General Care

Patients with dirty mouths and a poor swallow are at risk of aspiration pneumonia (c.f. SALT swallowing management guidelines). Adequate mouth care is essential. As with Respiratory function swallow can worsen quite quickly so regular reassessments need to be performed if clinically deteriorating. Other important measures include prevention of pressure sores, artificial tears other measures to prevent corneal scarring and maintaining an empty balder using intermittent or permanent catheterisation. Patients become extremely anxious and need careful explanation.

Nutrition:

If patients have difficulty swallowing a PEG should be considered early.

Treatment

Patients who are progressing and are likely to have difficulty walking should be treated with IVIG 0.4g/Kg daily for 5 consecutive days if no contraindications. It should be avoided in patients with significant renal failure. Ideally request a serum IgA level first because of the theoretical concerns of anaphylaxis in subjects who do not produce IgA. Waiting for the result need not delay treatment however. Subjects should be told and consented about risk of thrombosis, anaphylaxis, renal impairment, and theoretical transmission of disease because of the large number of donors required for each bag of IVIG. Infusions should be slow, and monitored carefully because of the risk of anaphylaxis. All patients should be referred for a neurological opinion, and to physiotherapy and occupational therapy. Plasma exchange may be an alternative to IVIG in some cases but treatments are not given together.

Outcome:

In a 1998 published study some 62% of patients make a ‘complete’ recovery after a year. Patients with severe GBS should be aware of this from early on, so as not to have unrealistic expectations. Causes for failure to return to work include anxiety and poor hand function. Good early management can prevent these complications. Patients making limited recovery can be referred to Neurorehabilitation Unit, NHNN.

When managing patients with GBS please think about lying in a bed unable to attract attention with a badly positioned leg causing pain. This situation is not managed by pressure relieving mattresses.