The Walton Centre NHS
NHS Foundation Trust

PROTOCOL FOR PRESCRIBING OF DEXAMETHASONE IN ADULT NEUROSURGICAL PATIENTS WITH BRAIN AND CENTRAL NERVOUS SYSTEM (CNS) TUMOURS

Executive summary

Patients with primary malignant brain tumours require corticosteroids to reduce cerebral oedema and improve symptoms and European Coooperative Oncology Group (ECOG) performance status

The following regime is recommended

8 mg BD - at 0800hrs and 12.00hrs for 3 days

4 mg BD – at 08.00hrs and12.00hrs until review in neurosurgical clinic

Gastric Protection - Omeprazole 20mgs OD

If patients show neurological deterioration whilst the dose is being reduced then dexamethasone should be increased back up to the previous dose and remain on that dose until further review.

Patients should be counselled around the dosing and side effects of steroids and provided with relevant literature.

Patients with suspected Primary Cerebral Nervous System (PCNS) Lymphoma should not be started on steroids as they can make PCNS Lymphoma disappear. If the patient needs urgent symptomatic treatment then this needs to be discussed with neurosurgery urgently

Introduction

Patients with radiologically suspected primary malignant intrinsic brain tumours should be started on Dexamethasone immediately by their medical team until neurosurgical opinion is sought.

Dexamethasone is a potent member of the glucocorticoid class of steroids and works by reducing brain tumour associated vascular permeability and cerebral oedema. This in turn should reduce intracranial pressure and improve accompanying symptoms and neurological deficits.

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Next Review By:
May 2024

Dexamethasone is the usual corticosteroid of choice for the management of tumour associated cerebral oedema due to its minimal mineralocorticoid activity, long half-life, and high potency

Patients with suspected PCNS Lymphoma should not be started on steroids. The case should be discussed urgently with neurosurgery and the patient should be prioritised for urgent diagnostic biopsy if clinically appropriate (consider an inpatient transfer).

Dexamethasone can make PCNS Lymphoma disappear rapidly reducing any potential biopsy target and should only be used pre-operatively if the patient needs urgent symptomatic treatment.

Dosage

Dexamethasone should be started at 8 mg bd – (total of 16 mg per day) at 08.00 hrs and 12.00 hrs to avoid insomnia

Most patients begin to improve symptomatically within hours of starting dexamethasone achieving maxima benefit within 24-72 hours

Dexamethasone should be given with or after food.

Although clinical response can occur within 24 h, intracranial pressure may not be consistently lower until 2–4 days after initial dosing

Dose should be tailored to effectively manage the patient's symptoms with minimal drug side effects.

The following regime is recommended

8 mg BD - at 0800hrs and 12.00hrs for 3 days

4 mg BD – at 08.00hrs and12.00hrs until review in neurosurgical clinic
If patients show neurological deterioration whilst the dose is being reduced then dexamethasone should be increased back up to the previous dose and remain on that dose until neurosurgical review.

For patients attending the neurosurgical best supportive care clinic advice will be given on steroid management in collaboration with palliative care.

Gastric protection

Dexamethasone can cause gastric irritation when given in high doses or over a prolonged period of time.

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There is currently an absence of national consensus and research data to support the use of proton pump inhibitors (PPI) to prevent gastric irritation in patients taking steroids for cerebral oedema.

In the absence of this guidance most providers have chosen to prescribe a PPI as a blanket policy. The PPI of choice at The Walton Centre NHSFT is Omeprazole 20 mg daily. This should be given before food prior to the morning dose of steroids.

It is important to note, that the long term use of PPI, are associated with potentially serious complications and so their use should be reviewed. Omeprazole should be discontinued at the same time as Dexamethasone.

Blood Glucose Monitoring

All patients must have glycaemic monitoring whilst prescribed dexamethasone.

Non diabetic patients should have capillary blood glucose levels checked at least once daily, pre evening meal.

Diabetic patients should have blood glucose monitoring four times daily.

Diabetic and non-diabetic patients should have the blood glucose results escalated if they are out of range and appropriate endocrine/diabetic CNS review if required.

Results of blood glucose monitoring should be closely monitored by the treating team.

Patient information

Patients should be counselled appropriately on the side effects of Dexamethasone.

Every patient diagnosed with a brain tumour who is prescribed dexamethasone should receive a copy of the Brain Tumour Charity steroid information leaflet.


Steroids for adults with brain tumours

Steroid alert cards should be given to patients starting on steroids

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