Steroid Prescribing in Palliative Care: Key Messages

Following several serious incidents relating to prescriptions of Dexamethasone in the trust, please find below some key practice points:

- Steroids may be used in palliative care for symptom control
- Dexamethasone is usual steroid of choice in palliative care.
- **Dexamethasone 6mg** is equivalent to **Prednisolone 42mg (6mg x7) orally.**
- Most indications are **"off label"** and potentially have serious **side effects** e.g.
    - **diabetes mellitus,**
    - **increased susceptibility to infections**
    - **significant myopathies**
- **Always document in/on the medical notes, drug chart and EDN**
    - **indication** for steroids
    - **plan for review or down titration.**
- **Keep to short courses** and **lowest effective dose.**
    - **Review after 5 days** when starting steroids **if no benefit**, **stop**.
        - **If benefit,** reduce to the lowest dose that sustains benefit and plan for on-going review.
        - Limit course of steroids to < 3 weeks, where possible, as can be tapered fairly quickly within this duration;
        - Longer courses > 3weeks will require slower and more prolonged tapering.
- **Consider a PPI for the duration of steroid course,** review need for PPI when steroids stop
- **Clear plan**
    - **Do not discharge patients** on **steroids without a clear plan**
    - Patients on high dose steroids will need **clear instructions** for **reduction**
- **Discharge letters** should always **provide**
    - **plan for steroid reduction/ review**
    - **clear designation of who is responsible**
    - **time frame** for when this should take place.

Side effects and drug interactions

- Refer to the BNF for advice
- Note hepatic metabolism of dexamethasone can be affected by potent inhibitors or inducers of cytochrome P450 (CYP3A4)

Checking blood glucose

When commencing steroids in hospital or in the community

- **Measure a baseline blood glucose** in patient not known to have diabetes or diet control diabetes
- If **blood glucose <11.1mmols** they should be educated on the risk of steroid induced hyperglycaemia and possible symptoms discussed *(tiredness, fatigue, thirst, dry mouth, frequent need to pass large volumes of urine, genital thrush, blurred vision).*
    - If they experience these symptoms they will need to be given a **blood glucose machine** and to monitor once daily pre evening meal as blood glucose tend to run high during the day and reverts to single figures the next morning.
- **If blood glucose >11.1 mmols** patient should be given a home **blood glucose monitor** to test for steroid induced hyperglycaemia and same guidance above re symptoms.
- For known diabetics on oral hypoglycaemic agents (OHAs) and/or insulin who are already monitoring their blood glucose at home need to be informed of steroid induced hyperglycaemia and need to **monitor more closely pre meal and pre bed.**

We would be aiming for diabetic control 6 to 15 mmols.

- If blood glucose levels **run >15mmols for more than two occasions** in **a 24-hour period** in any of these groups of patients then **start or increase diabetes medication.**
- **Steroid-induced hyperglycaemia** is usually treated with gliclazide tablets or insulin injections. Insulin therapy is more commonly use during a hospital stay as the patients is more likely to be acutely unwell and a more rapid glucose lowering is desired.
  Guidance can be found on staff room under Clinical information → Diabetes/endocrinology
  http://staffroom.ydh.yha.com/clinical-Directorate-Information/master-clinical-document-library/diabetes-endocrinology/best-practice-guidance-pathways/insulin-administration-during-glucocorticoid-steroid-therapy

Dose conversions : swapping between oral and subcutaneous

- When converting from oral dexamethasone to subcutaneous, the following conversion is appropriate (because oral bio availabilty is approximately 80%) .

Oral dose	Subcutaneous dose	Volume of injection when using brand with **3.3mg/mL** strength
2mg	1.65mg	0.5mL
4mg	3.3 mg	1mL

- Note : some people use a 1:1 conversion ie 4mg oral = 4mg subcutaneous, but this means administering a volume of 1.2mL for a 4mg dose when using the 3.3mg/mL strength of injection. This conversion is therefore discouraged.

Recommended starting doses of dexamethasone are as follows:

Indication:	Starting dexamethasone dose range
Malignant Spinal Cord Compression	16mg daily
Raised Intracranial Pressure (i.e. brain mets)	8mg – 16mg daily (16mg if severe, 8mg if mild-mod)
Appetite/ fatigue / well being	2mg - 4mg daily
Nausea & vomiting (not related to chemo)	4mg - 8mg daily
Bowel obstruction	6mg subcut daily
Airway obstruction/ Superior Vena Cava Obstruction (whilst seeking specialist advice regarding investigation and definitive management)	16mg daily
Pain (liver capsule/ nerve compression/ bone)	4mg - 8mg daily
Lymphangitis	8mg – 16mg daily

- Generally give oral doses in the morning as a single daily dose, but with higher doses, if the dose is spilt, avoid giving after 2pm. The same applies to subcutaneous dexamethasone as it has a long duration of action. If adding to a syringe driver check compatibility (Pharmacy Medicines Information ext 5960).

- Patients should be educated about the risks/ benefits of steroids and should carry/be provided with a steroid card for the course of their treatment

Contact numbers

If you are unsure, please seek advice from treating team, diabetes team or palliative care team, if involved in patient care.

Treating team	via hospital switchboard
Diabetic specialist nurses	Scarborough 01723 342274 York 01904 724938
Hospital palliative care team	Scarborough 01723 342446, York 01904 725835
Community palliative care team	Scarborough 01723 356043, York 01904 724476

For more information see the Scottish Palliative Care Guidelines

https://www.palliativecareguidelines.scot.nhs.uk/guidelines/medicine-information-sheets/dexamethasone.aspx

References

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2. Management of hyperglycaemia and steroid (glucocorticoid) therapy Oct 2104 JBDS-IP *www.diabetologists-abcd.org.uk/JBDS/JBDS_IP_Steroids.pdf*
3. Steroid hyperglycemia: Prevalence, early detection and therapeutic recommendations: A narrative review Eloy, H et al World J Diabetes 2015; 6(8): 1073–1081. 0.4239/wjd.v6.i8.1073