

## **CORTICOSTEROIDS CAN HAVE A NUMBER OF CNS ADVERSE REACTIONS**

**Theme: Corticosteroids can have a number of CNS adverse reactions including severe depression, mania, psychosis, and delirium. The mechanism of CNS effect is unknown.**

### Drug, dose and duration

- Psychomotor stimulant effect is more pronounced with some steroids eg-dexamethasone. Considering other steroids may be an option.
- There is a dose-response relationship, with higher doses carrying a greater risk.
- Peak levels of steroids also appear to relate to psychosis in some; this may be improved by dividing the daily steroid dose.
- Psychosis may also occur with sudden withdrawal (eg too fast dose reduction), or omission (eg poor patient compliance) of steroids. Patient education is important.
- No correlation has been found between the *duration* of steroid treatment and the occurrence of psychiatric changes.

### Risk of Recurrence

There is no evidence that psychiatric disturbance with the use of steroids predisposes the patient to the same symptoms upon later administration of steroid, or that a history of psychiatric illness predicts occurrence. Neither should deter clinicians from using steroids where clinically indicated.

### Age

No particular age group appears to be at increased risk

### Onset

Most who develop symptoms will do so within the first week.

### Management

#### • General

1. Educating patients about the potential adverse effects and evaluation of symptoms, including suicidal thoughts, at each patient encounter can enhance early identification and intervention.
2. Careful reduction or cessation of the steroid is the first line of therapy. Psychosis usually settles fairly rapidly once steroids are ceased.
3. When the patient has recovered, the nature of the psychiatric disturbance should be explained to them.

#### • Depression

Adults are treated with an antidepressant and maintained at the lowest effective corticosteroid dose. There is no evidence for the efficacy of antidepressants in children.

#### • Psychosis/Mania

There is some literature to suggest that valproate, carbamazepine or lithium may be an option in patients with mania related to steroid use. (Lithium is to be used with caution in those with renal problems).

Both older and newer antipsychotics have benefit in steroid-induced psychosis (newer antipsychotics may have lesser side-effects). There is limited data in children.

The best antipsychotic is probably the one the treating doctor is most familiar with, used in the lowest effective dose, with close monitoring for adverse effects.

Treatment may have to be continued for up to a week post discharge.