Kenalog for use in seasonal allergic rhinitis and other seasonal allergic conditions
BACKGROUND
UK and international guidelines suggest the management of hayfever should start with allergen avoidance and if that fails, treatment with an antihistamine. Where these treatments are ineffective, regular intranasal corticosteroids should be used. Intranasal steroids are more effective if used at the start of the season and in the presence of established nasal congestion, a topical decongestant may be used for up to one week as a pre-treatment. (1,2) Occasionally for patients with severe symptoms not responding to topical steroids and antihistamines and when stringent control of symptoms is required, for example sitting exam or getting married, it may be reasonable to supplement maintenance treatment with a brief course of oral corticosteroids. These should however be used in the lowest effective dose (e.g. prednisolone up to 20 mg daily for up to 5 days). Both UK and international guidelines advise against the routine use of injectable corticosteroids for hayfever (1,2).

Triamcinolone (Kenalog) can be given IM - 4 mg is equivalent to 5mg of prednisolone and the usual dose given is between 40-80mg in a season. The licensed indications include use in seasonal allergies in patients who do not respond to conventional therapy.

UNWANTED EFFECTS:
These are described below. Most are very uncommon and not all need be discussed with every patient. More common effects and those which are pertinent to an individual patient should be discussed as part of the consent procedure.

There is a small risk of avascular necrosis of the femoral head with Kenalog injection. This is particularly the case for those who have repeated doses year after year [BMJ 30th June 2001 Vol 322 page 1589-60].

Injectable steroid therapy for seasonal allergic rhinitis should not be used as a first line treatment but for patients in whom other measures have failed and where there are compelling reasons to give depo-steroid. Patients should be informed of the potential risks of the treatment and informed consent should be sought.


Information for those administering this treatment

LICENSED INDICATION
For intramuscular use where a sustained systemic corticosteroid treatment is required i.e. in allergic states e.g. bronchial asthma, seasonal or perennial allergic rhinitis (if seasonal one injection is often sufficient to induce remission of symptoms).

CAUTIONS FOR USE
The lowest effective dose for the minimum period of time should be used to minimise side effects.

The vials are intended for single use, multiple use may lead to contamination.

Dermal/sub-dermal atrophy or changes in the make-up of the connective tissue and depressions in the skin at the injection site may occur due to the presence of adrenal steroid crystals in the dermis. The skin should regenerate within a few months after all the crystals have been absorbed. The recommended dose should not be exceeded to minimise the risk of dermal and sub-dermal atrophy.

To avoid possible depigmentation and subcutaneous atrophy, doses should not be placed too superficially in easily visible sites in deeply pigmented patients.

Systemic and local side effects may occur following injection as systemic absorption of triamcinolone occurs although this is minimal.

Suppression of the inflammatory response and immune function increases the susceptibility to fungal, bacterial or viral infections and their severity. Corticosteroids may mask some signs of infection. It must be noted that the clinical presentation may often be atypical and may reach an advanced stage before being recognised.

Chickenpox is of serious concern since although normally a minor disease in normal patients, it may be fatal in immunocompromised patients. Patients (or parents of children) without a definite history of chickenpox should be advised to avoid close personal contact with chickenpox or herpes zoster. If exposed they should seek urgent medical attention. Exposed, non-immune patients receiving systemic corticosteroids or who have received them in the last 3 months need passively immunising with the varicella zoster immunoglobulin [VZIG] within 10 days of exposure to the chickenpox. If chickenpox is diagnosed whilst under treatment they should not be stopped and the dose may need to be increased. The chickenpox requires specialist care and urgent treatment.

As patients receiving systemic corticosteroids are immunocompromised, live vaccines should not be given. The antibody response to other vaccines may also be diminished.
Care is needed when patients are given corticosteroids whilst receiving digoxin due to the former's potential for causing electrolyte disturbance/potassium loss.

Special care should be taken when considering the use/using corticosteroids in patients with the following conditions: Hypothyroidism, ocular herpes simplex (could lead to corneal perforation), myasthenia gravis, diverticulitis, ulcerative colitis, abscess or other pyogenic infections, predisposition to thrombophlebitis, peptic ulceration, epilepsy, renal insufficiency, fresh intestinal anastomoses, liver failure or cirrhosis, glaucoma (or a family history of glaucoma), history of tuberculosis, previous corticosteroid induced myopathy, diabetes mellitus (or a family history of diabetes mellitus), previous corticosteroid induced psychosis or other severe affective disorders, hypertension or congestive heart failure, osteoporosis (post menopausal women are particularly at risk). Frequent patient monitoring is necessary.

Corticosteroid effects may be enhanced in those patients with hypothyroidism or cirrhosis.

Menstrual irregularities may occur; the possibility of this should be mentioned to all pre-menopausal female patients.

All corticosteroids increase calcium excretion therefore it is recommended that if therapy is to be for an extended period of time that calcium supplements are given to lessen any potential osteoporotic effect.

PREGNANCY
Corticosteroids cross the placenta. There may be a very small risk of cleft palate and intra-uterine growth retardation in the foetus; there is evidence of harmful effects on pregnancy in animals. Avoid.

BREAST-FEEDING
Triamcinolone is excreted in breast milk and infants of mothers taking systemic corticosteroids should be monitored carefully for signs of adrenal suppression. Avoid.

SIGNIFICANT DRUG INTERACTIONS:
SEE BNF
Side Effects

NEUROPSYCHIATRIC REDUCED
Euphoria, psychological dependence, mood swings, depression, insomnia, personality changes, psychosis, seizures, aggravation of schizophrenia and increased intracranial pressure with papilloedema in children.

ANTI-INFLAMMATORY AND IMMUNO-SUPPRESSIVE EFFECTS
Increased susceptibility and severity of infections with suppression of clinical symptoms and signs, recurrence of dormant tuberculosis, opportunistic infections and may suppress reactions to skin tests.

GASTRO-INTESTINAL
Dyspepsia, peptic ulceration with perforation and haemorrhage, abdominal distention, oesophageal ulceration and candidiasis, perforation of bowel and acute pancreatitis.

Small, reversible rises in ALT and AST have been observed following corticosteroid administration.

FLUID AND ELECTROLYTE BALANCE
Sodium and water retention, potassium loss, hypokalaemic alkalosis, hypotension and congestive heart failure in susceptible patients.

DERMATOLOGICAL
Impaired healing, thin fragile skin, skin atrophy, bruising, striae, acne, telangiectasia, petechiae and ecchymosis.

ENDOCRINE/METABOLIC
Suppression of the HPA axis, growth suppression in infancy, childhood and adolescence, cushingoid facial features, weight gain, hirsutism, impaired carbohydrate tolerance with increased requirements for antidiabetic therapy, menstrual irregularities and amenorrhoea, negative nitrogen and calcium balance and increased appetite.

MUSCULOSKELETAL
Muscle weakness, proximal myopathy, osteoporosis, vertebral and long bone fractures, avascular osteonecrosis, tendon rupture and aseptic necrosis.
OPHTHALMIC
Cataracts with possible damage to the optic nerve, increased intra-ocular pressure and glaucoma, papilloedema, corneal or scleral thinning, exophthalmos and exacerbation of ophthalmic viral or fungal disease.

GENERAL
Hypersensitivity including anaphylaxis, nausea, vertigo, thromboembolism and leucocytosis.

GENERAL EFFECTS ASSOCIATED WITH PARENTERAL CORTICOSTEROID THERAPY
Allergic or anaphylactic reactions, cutaneous and subcutaneous atrophy, sterile abscess, post injection flare following intra-articular use, hypo- or hyper-pigmentation.