Corticosteroid use for musculoskeletal and rheumatic conditions during COVID-19 pandemic

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Lay summary

This guidance is to help doctors and other relevant healthcare professionals. Steroids – oral and injected – can be an important and effective treatment for some musculoskeletal conditions, particularly rheumatic conditions, some types of arthritis and joint pain. Sometimes these can be lifesaving. Stopping steroids suddenly can be dangerous, and should only be done under clinical supervision. There is a concern that steroids can increase risk from the novel coronavirus (Covid-19). Because of this, we should consider alternatives to steroids where possible. If steroids are needed, use the lowest possible dose for the shortest possible time. If people are already taking steroids, see if the dose can be safely reduced. And only give steroid injections for severe symptoms, and where there are no other options.

- Don't stop existing steroids but taper dose if possible and clinically safe
- Think before starting steroids in the current epidemic
- Use lowest possible dose of oral steroids
- Only give steroid injections if significant disease activity and no alternatives

Background

The current WHO guidance[1] for the management of severe acute respiratory infection in patients with COVID-19 is to avoid giving systemic corticosteroids. We therefore need to be cautious when using steroids for other indications during the pandemic. Steroids have been associated with an increased risk of mortality in patients with influenza and delayed viral clearance in patients with Middle East respiratory syndrome coronavirus (MERS-CoV) infection. Although they were widely used in management of severe acute respiratory syndrome (SARS), there was no good evidence for benefit, and there was persuasive evidence of adverse short- and long-term harm[2]. A recent study of patients with COVID from China, reports that patients receiving corticosteroids did not have an effect on mortality, but rather delayed viral clearance.[3]

Long acting, usually insoluble steroid formulations are frequently used in Rheumatic diseases. To put this into context, Triamcinolone Acetonide 40mg is equivalent to ten times the normal daily physiological steroid production. Injected steroids have been shown to cause a variable degree of

adrenal suppression for at least some weeks.[4] The potential impact of this immunological suppression in a patient incubating COVID-19 at the time or in the future is unknown.

Although children and young adults are thought to be at lower risk this guidance also applies to them.

Steroid Route & Indications

Oral prednisolone – Patients on long term steroids should not stop their treatment. If commencing steroids during the pandemic use the lowest possible dose and taper corticosteroid therapy as fast as possible in the clinical context. Maximum 15mg (0.5mg/kg) daily or equivalent for new polyarthritis (including Juvenile onset) or Polymyalgia Rheumatica; maximum 40mg (0.75mg/kg) daily for Giant Cell Arteritis (GCA); maximum 60mg (1mg/kg) daily for GCA with ocular involvement, large vessel involvement or vasculitis; and maximum 30 mg daily prednisolone for 1 week for treating gout or pseudogout flares where oral NSAIDs or colchicine are contraindicated and intra-articular joint injection is not possible. Higher doses of oral prednisolone should only be used on specialist advice. High dose steroids may be required to manage an acute flare of severe autoimmune Connective Tissue Disease or vasculitis and specialist advice should be sought.

Intramuscular injections – only use to control significant disease flare that is compromising ability to function, and consider using lower doses (maximum recommended 120mg Depomedrone or equivalent).

Intra-articular injections for inflammation – only use for inflammatory joints where there is active synovitis +/- effusion, and consider using lowest clinically effective doses (maximum 40mg depomedrone/ triamcinolone for large joints; 20mg for smaller joints). For children and young people with Juvenile Idiopathic Arthritis, consider using triamcinolone acetonide rather than hexacetonide, particularly if multiple joints injected.

Intra-articular, peri-articular and soft tissue injections for non-inflammatory Musculoskeletal pain, e.g osteoarthritis, shoulder pain, lateral hip pain, carpal tunnel syndrome, de Quervains. Recommend simple analgesia, activity modification, splinting where appropriate and exercise as first line and in the majority. Only consider if patient has high levels of pain and disability, that has failed first line measures, and continuation of those symptoms will have a significant negative effect on the their health and well-being. Must be supported with guidance related to activity modification and exercise therapy

Injections for spinal conditions - In general avoid for spinal pain and recommend simple analgesia activity modification and exercise. Consider referral for epidural or nerve root block for severe radicular pain[5].

Intravenous Methyl Prednisolone – should be reserved for those with clinically active disease and given on specialist advice only.

Should I still be injecting corticosteroids during the current COVID-19 pandemic?

<u>As is current practice, injections must not be undertaken in individuals with active infections and the potential arises to do harm to individuals who may be incubating or later develop COVID-19.</u>

Steroid injections are common in MSK management with the aim of easing pain, increasing mobility and quality of life. Their duration of effect is variable but can provide several months of benefit. However, clinicians need to give additional consideration at this time as to whether the risks outweigh the benefits. As a result of the long quarantine period of an average of 14 days, there is a risk that asymptomatic patients who are carrying the virus could be treated with a steroid injection, potentially putting them at increased risk of an adverse outcome from the virus. Particular consideration needs to be given to vulnerable patient groups which include patients over the age of 70, those with diabetes, ischaemic heart disease, chronic respiratory disease and hypertension, as well as those extremely vulnerable patient groups[6]

You will need to undertake an individual risk analysis on a case by case basis.

1. You must screen patients for any signs and symptoms that may indicate the presence of COVID-19 or recent close personal contact with a patient with suspected or confirmed COVID-19. These patients should not attend clinics and must not receive injection therapy. For those who do attend, you must screen to ensure you understand a person's full medical and drug history as is normal practice.
2. You must exercise your usual clinical judgment and decision making with each individual case including their health, age, clinical risk, and presence of co-morbidities.
3. Consider if the injection is required to keep a person mobile and/or able to look after themselves independently or can you delay the injection until the COVID-19 infection risk decreases?
4. Consider if another treatment option presents less risk but possible similar outcomes at this time?

If you are a non prescribing clinician injecting under a Patient Group Directive then you must follow local guidelines.

If you do decide to undertake injection therapy you MUST;

1. Adhere strictly to your local infection control policies including cleaning and use of personal protective equipment (PPE) as required.
2. Consider if you can you reduce the maximum dose of the steroid or choose an alternative medicine to minimise systemic effects of corticosteroid? (e.g. injecting bilateral joints at separate times)
3. Ensure patients are fully aware of the potential increased risk and the lack of clear evidence related to COVID-19. They must be engaged in shared decision making.
4. Obtain and document informed consent to proceed with injection therapy.

Refs

1. *Clinical management of severe acute respiratory infection when novel coronavirus (nCoV) infection is suspected. 2020 World Health Organization. WHO. https://www.who.int/docs/default-source/coronaviruse/clinical-management-of-novel-cov.pdf*
2. *Russell CD, Millar JE, Baillie JK. Clinical evidence does not support corticosteroid treatment for 2019-nCoV lung injury. Lancet 2020; 395:473.*
3. *Huang et al, Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China www.thelancet.com Vol 395 February 15, 2020*

4. *Friedly J et al, Systemic effects of epidural steroid injections for spinal stenosis, Pain: May 2018, Vol 159*
5. https://mcusercontent.com/de6171e0ef375ef2e0bc53902/files/a0e8feb1-6117-41e1-a6b7-ecb37debe292/200319_BASS_Steroid_Injections_and_NSAIDs_COVID_19_.pdf
6. https://www.gov.uk/government/publications/guidance-on-shielding-and-protecting-extremely-vulnerable-persons-from-covid-19/guidance-on-shielding-and-protecting-extremely-vulnerable-persons-from-covid-19

This statement is aligned with the Faculty of Pain Medicine guidance on the use of injected steroids which can be found at *https://fpm.ac.uk/sites/fpm/files/documents/2020-03/FPM-COVID-19-Steroid-Statement-2020.pdf*

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