



FACULTY OF PAIN MEDICINE

of the Royal College of Anaesthetists

FPM Statement: Covid vaccines and single shot steroid injections

Single shot steroid injections are an important treatment option in Pain Management. There are legitimate concerns over the potential for reduction in the efficacy of Covid vaccines due to the immunosuppressive effects of steroids. This might apply if a steroid injection was to be given shortly before or after a Covid vaccination. To reinforce this concern, there is evidence that single dose steroids do reduce the benefit of the influenza vaccine [1], but the timescale of this interaction is unclear.

These issues have not, to date, been directly addressed by the vaccine manufacturers and their pre- authorisation studies, though we understand that this data may become available as part of post-marketing surveillance.

During trials, vaccines were given to individuals on long-term steroids, and trials did not exclude individuals who required 'single shot' steroids. However, there is no analysis as to whether this resulted in an altered or reduced effect of the vaccine.

Daily cortisol production is around 20mg/day, and Triamcinolone 40mg or Dexamethasone 4mg are around 100mg equivalent [2], although immunosuppressant effects with dexamethasone may be more potent[3], despite it being a soluble preparation. Data on the actual effect of exogenous steroids on the immunological system are sparse.

[This guidance from the Arthritis and Musculoskeletal Alliance \(ARMA\)](#) gives an up-to-date view of single shot steroids with respect to the various Covid vaccinations, and is supported by the FPM.

New data may become available as the vaccinations are rolled out and guidance should be checked regularly.

It is advisable not to perform a steroid based pain injection within the two weeks before and for two weeks after the COVID vaccine. If steroid is not included in the pain injection, the gap between the COVID vaccine and pain injection should be one week either side of the vaccine. It is important that the risks/benefits are discussed and shared decision-making process is adopted in determining the timing of steroid based pain injections in relation to receipt of a COVID-19 vaccine given that patient-specific factors will vary.

References:

[1] Sytsma TT, Greenlund LK, Greenlund LS. Joint Corticosteroid Injection Associated With Increased Influenza Risk. *Mayo Clin Proc Innov Qual Outcomes*. 2018;2(2):194-198. Published 2018 Mar 20. doi:10.1016/j.mayocpiqo.2018.01.005

[2] <https://bnf.nice.org.uk/treatment-summary/gluocorticoid-therapy.html> (accessed 27th January 2021)

[3] Liu, Dora & Ahmet, Alexandra & Ward, Leanne & Krishnamoorthy, Preetha & Mandelcorn, Efrem & Leigh, Richard & Brown, Jacques & Cohen, Albert & Kim, Harold. (2013). A practical guide to the monitoring and management of the complications of systemic corticosteroid therapy. *Allergy, asthma, and clinical immunology : official journal of the Canadian Society of Allergy and Clinical Immunology*. 9. 30. 10.1186/1710-1492-9-30.

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