Current condition of glucocorticoids in elite sports: A mini review.

Frank Bugerit*

Department of Rheumatology and Clinical Immunology, Charité - University Medicine Berlin, Berlin, Germany

Introduction

The use of systemic Glucocorticoids (GCs) in sports is still a source of controversy. Some in the sports world believe that GC treatment is entirely acceptable for athletes when clinically warranted, while others argue that athletes with chronic or acute medical issues should not be permitted to compete rather than be allowed to utilise systemic GCs or local injections. Some argue that GCs should be removed totally from the WADA List of Forbidden Substances, while others argue that the number of prohibited routes should be increased and Therapeutic Use Exemptions should be eliminated (TUEs) [1,2].

Are GCs a scourge in sports or a rather well-controlled therapeutic product? This paper looks at (1) the prevalence of GC use in the general and athletic populations, (2) anti-doping regulations, (3) the science behind whether systemic GCs can improve performance, (4) health risks, adverse effects, and negative performance effects, (5) sporting federation strategies and policies to ensure appropriate GC use, and (6) the current management of the TUE process for GCs.

In both the general and athletic populations, the use of GC is common

GCs are one of the most often used and effective medicine classes in the general population, and they come in a wide range of pharmacological formulations. GCs are employed in a variety of clinical specialties around the world, mostly because of their anti-inflammatory and immunosuppressive effects. Oral GCs are an accessible and economical alternative to targeted but more expensive drugs, and their medicinal use appears to have expanded in recent years. Oral GCs are frequently utilised as part of first-line treatment in several infectious illness settings in many countries, though their efficacy is still being studied. Musculoskeletal injuries and asthma are more common in athlete communities, so it's not unexpected that legitimate therapeutic GC is used frequently [3].

Anti-doping policies

If two of the three criteria listed in the World Anti-Doping Code are met, substances or procedures are considered for inclusion in the List: (1) has the potential to improve or improve sport performance; (2) poses a real or possible health danger to the athlete; (3) goes against the spirit of the game. When given *via* 'systemic' (oral, rectal, intramuscular, or intravenous) methods, GCs are prohibited in competition. The formulation, type of esterification and salt, administration route, site, and manner of administration all influence the pharmacokinetics of GCs. To prevent exceeding the reporting limit, any physician or athlete will be unsure when to discontinue utilising systemic GCs before the in-competition period [4].

Do systemic GCs help you perform better?

Some athletes have most likely tried to harness the ostensibly performance-enhancing effects of systemic GCs that they believe are beneficial to their sport. The complicated and pleiotropic processes of GC activity, on the other hand, suggest that these medications are an unwieldy tool for the performance-enhancing athlete, and that they are a less common component of doping regimens than in the past. Some patients and athletes reported feeling joyful after receiving systemic dosage.

Athletes and doctors have identified ineffective strategies for losing weight and preserving muscle mass that include the use of systemic GC, restricted eating, and low-intensity training. Athletes have recently claimed systemic GC's putative efficacy while simultaneously admitting to using other performance-enhancing procedures and chemicals, including anabolic steroids like testosterone.

Health risks, unfavourable events, and performance consequences

Treatment with GCs for a variety of ailments has a lengthy history and a relatively low risk profile. High doses or long-term use of systemic GCs can be harmful to an athlete's health. Physician examination, diagnosis, and reasoning are essential, and the advantages of treatment must be evaluated against the dangers and side effects. Potential performance enhancing use, as mentioned above and assumed to be limited to specific sport contexts with high-dose GC use, could also pose major health hazards to an athlete [5].

References

1. Fardet L, Petersen I, Nazareth I. Prevalence of long-term oral glucocorticoid prescriptions in the UK over the past 20 years. Rheumatol. 2011;50(11):1982-90.
2. Laugesen K, Jørgensen JO, Sørensen HT, et al. Systemic glucocorticoid use in Denmark: a population-based prevalence study. BMJ Open. 2017;7(5):e015237.

***Correspondence to:** Frank Bugerit, Department of Rheumatology and Clinical Immunology, Charité - University Medicine Berlin, Berlin, Germany, E-mail: frank.bugerit@charite.de

***Received**: 30-April-2022, Manuscript No. AAJPTSM-22-62264; **Editor assigned**: 06-May-2022, PreQC No. AAJPTSM-22-62264(PQ); **Reviewed**: 20-May-2022, QC No. AAJPTSM-22-62264; **Revised**: 24-May-2022, Manuscript No. AAJPTSM-22-62264(R); **Published**: 31-May-2022, DOI:10.35841/aajptsm-6.3.115*

***Citation:** Bugerit F. Current condition of glucocorticoids in elite sports: A mini review. J Phys Ther Sports Med. 2022;6(3):115*

3. Walsh M, Merkel PA, Peh CA, et al. Plasma exchange and glucocorticoid dosing in the treatment of anti-neutrophil cytoplasm antibody associated vasculitis (PEXIVAS): protocol for a randomized controlled trial. Trials. 2013;14(1):1-7.
4. Voswinkel J, Müller A, Lamprecht P. Is PR3-ANCA formation initiated in Wegener's granulomatosis lesions? Granulomas as potential lymphoid tissue maintaining autoantibody production. Ann of the New York Academy of Sci. 2005;1051(1):12-9.
5. Yates M, Watts RA, Bajema IM, et al. EULAR/ERA-EDTA recommendations for the management of ANCA-associated vasculitis. Ann of the Rheumatic Dis. 2016;75(9):1583-94.

Citation: *Bugerit F. Current condition of glucocorticoids in elite sports: A mini review. J Phys Ther Sports Med. 2022;6(3):115*