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Glucocorticoids: A Forgotten Strategy in Rheumatology? A Systematic ScopingReview of Historical Use, Current Evidence and Future Perspectives V.3

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We use this protocol and it's working

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Disclaimer

Abstract

This scoping review protocol aims to systematically map the available evidence on the use of intramuscular glucocorticoids (IM-GCs) in the management of rheumatoid arthritis, with a particular focus on repeated administration regimens (e.g., methylprednisolone 120 mg or triamcinolone 80 mg administered 1–4 times yearly). The review will follow PRISMA-ScR guidelines and include a comprehensive search of major biomedical databases, incorporating both interventional and observational studies as well as clinical guidelines.
The expected findings will clarify the clinical indications, effectiveness, and safety profile of IM-GCs in RA, addressing a key research question identified by the 2022 EULAR recommendations. This synthesis will support evidence-informed practice and guide future studies on the positioning of depot glucocorticoids in rheumatology.

ADMINISTRATIVE INFORMATION

1 **Title:** Glucocorticoids: A Forgotten Strategy in Rheumatology? A Systematic Scoping Review of Historical Use, Current Evidence and Future Perspectives

2 **Registration:** This scoping review protocol follows the PRISMA-ScR (Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews) guidelines. The protocol is registered and publicly available on protocols.io

3 **Authors:** Dr. Gianluca Poncina et al.

4 **Amendments:** Any important amendments to this protocol will be documented on protocols.io with a description, rationale, and date of change.

5 **Support:** No specific funding. Institutional support from the University of Padova – U.O.C. Reumatologia.

INTRODUCTION

6 **Rationale:** Despite historical use of intramuscular glucocorticoids (IM-GC) in RA, their role has become marginal in contemporary practice. EULAR guidelines highlight the need to investigate their effectiveness and safety, particularly in repeated administrations. This review aims to map the literature on IM-GC use in RA and other rheumatic diseases.

7 **Objectives:** To explore and map the available evidence on the effectiveness and safety of repeated intramuscular glucocorticoids in patients with RA and other rheumatic diseases, focusing on regimens such as methylprednisolone 125 mg or triamcinolone 80 mg administered 1–4 times per year.

METHODS

8 **Eligibility Criteria:**
Inclusion criteria: - Adults with rheumatologic conditions (RA, SLE, PMR, AxSpA, PsA, CTD, DM) - Studies on IM-GC (e.g., methylprednisolone, triamcinolone) - Any study design (RCTs, observational, reviews, guidelines and grey literature) - Outcomes on effectiveness or safety
Exclusion criteria: - Non-rheumatic indications - Non-intramuscular glucocorticoids (unless comparison included) - Preclinical or animal studies

Time Frame: No time restrictions. **Language:** English. **Publication Status:** Published literature.

9 **Information Sources Databases to be searched**: - PubMed/MEDLINE - Embase - Scopus - Web of Science - Cochrane Library - ClinicalTrials.gov

10 **Search Strategy:** Draft search strategy will include terms for 'glucocorticoids', 'intramuscular', and rheumatic diseases. No date or publication status restrictions will be applied. The strategy will follow PRISMA-S guidelines. Full search strings will be provided in supplementary files.

11 **Study Records Data management:** Search results will be managed using a reference management software (Zotero) and uploaded into Covidence for screening.

12 **Selection process:** Two reviewers will independently screen titles/abstracts and full texts based on eligibility criteria. Discrepancies will be resolved through discussion or by a third reviewer. Selection will be documented using a PRISMA 2020 flow diagram.

13 **Data collection process:** Data will be charted using a standardized, ad hoc form developed in Google Sheets, based on consensus among the reviewers. The form includes the following data items: author(s), year of publication, country of origin, study aims/purpose, population and sample size, methodology/methods, type and dose of intramuscular glucocorticoid, frequency of administration, withdrawals from the study, outcomes and key findings relevant to the scoping review questions. A calibration exercise was conducted on a sample of five studies, and data extraction was performed independently by two reviewers. Discrepancies were resolved through discussion and, when needed, adjudicated by a third reviewer.

14 **Data Items:** Study design, population, IM-GC type and dose, administration frequency, outcomes (effectiveness and safety), key findings.

15 **Outcomes and Prioritization:** Primary outcomes include disease activity control, flare prevention, patient-reported outcomes, and safety profile (AEs, metabolic effects).

16 **Risk of Bias in Individual Studies** Although formal exclusion based on quality was not planned, a critical appraisal of individual sources of evidence was conducted using the Joanna Briggs Institute (JBI) Critical Appraisal Checklists, with tools selected according to study design. The goal was to enhance interpretation of the findings. Appraisals were independently conducted by two reviewers, with discrepancies resolved by consensus. The results of the appraisal were used to inform the narrative synthesis, without excluding studies.

17 **Data Synthesis:** Data will be synthesized using a narrative approach, organized around emerging thematic domains such as disease indication, type and regimen of IM-GC used, clinical setting, and reported outcomes (e.g., disease activity, patient-reported

outcomes, safety). Summary tables will be developed to report study characteristics and main findings. Where relevant, visual representations such as conceptual maps or matrices may be included to illustrate trends and knowledge gaps.

18 **Meta-bias(es):** Not applicable to scoping reviews.

19 **Confidence in Cumulative Evidence:** Not applicable to scoping reviews.