Jul 03, 2023

Changes in Bone Mineral Density and Incidence of Fractures during Two Years of Low Dose Glucocorticoid Treatment for Rheumatoid Arthritis: Protocol for a Systematic Review and Individual Participant Data Meta-Analysis

DOI
dx.doi.org/10.17504/protocols.io.6qpvr3ombvmk/v1

Andriko Palmowski[1]

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

Andriko Palmowski
Department of Rheumatology and Clinical Immunology, Charité ...

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Protocol Citation: Andriko Palmowski 2023. Changes in Bone Mineral Density and Incidence of Fractures during Two Years of Low Dose Glucocorticoid Treatment for Rheumatoid Arthritis: Protocol for a Systematic Review and Individual Participant Data Meta-Analysis. **protocols.io https://dx.doi.org/10.17504/protocols.io.6qpvr3ombvmk/v1**

Protocol status: Other
This is a systematic reivew protocol.

Created: July 03, 2023

Last Modified: July 03, 2023

Protocol Integer ID: 84382

Keywords: effects on bone mineral density, changes in bone mineral density, years of low dose glucocorticoid treatment, low dose glucocorticoid treatment, data on bone mineral density, lower bone mineral density, bone mineral density, fractures in gc, incidence of fracture, rheumatoid arthritis, glucocorticoid, common adverse effects of the treatment, higher gc dosage, fracture, low dose gc, controlled trial, effects of low dose, published trial, common adverse effect, drugs in the treatment, treatment over longer period, low dose

Funders Acknowledgements:
Elsbeth Bonhoff Stiftung
Grant ID: 244
The Oak Foundation
Grant ID: OCAY-18-774-OFIL

Abstract

Background
Glucocorticoids (GCs) are regularly used drugs in the treatment of rheumatoid arthritis (RA), and lower bone mineral density and fractures are common adverse effects of the treatment with higher GC dosages. However, the effects of low dose (i.e., ≤7.5mg/day) and very low dose (i.e., ≤5mg/day) treatment over longer periods of time (i.e., ≥ 24 months), as often seen in RA, have not been fully elucidated yet.

Objective
To conduct a systematic review and meta-analysis of individual patient data from long-term randomized controlled trials (RCTs) in RA, which compared low dose GCs to a control treatment, in order to investigate the effects on bone mineral density and incidence of fractures (clinical/symptomatic).

Methods
We will search the literature to identify published trials which collected data on bone mineral density and/or the incidence of fractures. This will be followed by the acquisition of individual participant data. Included RCTs will be combined to compare bone mineral density and fractures in GC and control groups. To underpin our findings, we will perform additional analyses to identify potential effect modifiers and a sensitivity analysis related to missing data.

Troubleshooting

PDF Protocol

1 Protocol.pdf