Common anti-inflammatory may increase risk of diabetes

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A commonly prescribed anti-inflammatory may increase the risk of diabetes after just one week of treatment, according to new findings presented at The Society for Endocrinology Annual Conference. Healthy men given doses of the drug comparable to those used to treat inflammatory disorders had changes in markers of blood sugar metabolism associated with an increased risk of developing diabetes. The study findings highlight the potential long-term health implications for people regularly taking these drugs and that medical professionals may need to consider and monitor the potential side-effects, to avoid future debilitating conditions.

Glucocorticoids (GCs) are one of the most commonly prescribed anti-inflammatories for conditions such as arthritis, asthma, allergies and adrenal insufficiency. GC treatment at high doses for a long duration is known to be associated with metabolic side-effects that may increase risk of diabetes and obesity but there are currently no studies examining the short-term effects of GCs at the more regularly prescribed, lower doses. As 2-3% of the UK population take GCs for conditions of varying severity, it is important to investigate whether these metabolic side-effects occur in lower dose, short-term therapy.

Dr. Riccardo Pofi, from Sapienza University of Rome and Prof Jeremy Tomlinson from the University of Oxford, measured markers of metabolism in healthy men given commonly prescribed doses (10 and 15mg) of GCs (prednisolone) after just one week of treatment. Although commonly checked clinical and biochemical parameters such as fasting

blood sugar levels, weight and general health was unaffected, changes in metabolic markers indicated that their blood sugar regulation was impaired.

"This is the first study to examine the very short-term metabolic effects of commonly prescribed doses of glucocorticoids on healthy men and indicates, that even at these lower doses, glucose metabolism is impaired, suggesting an increased risk of diabetes with continued treatment," Dr. Pofi comments.

These novel findings not only highlight the importance of determining the best GC dose that balances effectiveness with potentially negative metabolic effects, but also that medical professionals should be more aware of these risks and may need to monitor them in patients both on short and longer-term therapy.

Dr. Pofi says, "This suggests that we need to more accurately assess GC use in patients to prevent and reduce the undesired effects, especially in patients for which steroid treatment is essential for life."

Future larger studies are required to confirm these findings and improve our understanding of how they are caused. Dr. Pofi now plans to investigate the metabolic effects of taking GCs alongside diabetes drugs, to assess whether the unwanted side effects of GCs can be reduced or prevented with combined treatment.

More information: Abstract P242: Glucocorticoid treatment is associated with dose-dependent effects in healthy male volunteers

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