

Therapeutic Effects of Glucagon-Like Peptide -1 Receptor Agonist in Adult Overweight and Obese Women with Polycystic Ovary Syndrome: A Narrative Review

Keli F^{1,2,3}, Panicker S^{1,2,3}

¹University of South Wales

²University of Nairobi Health Services

³Kenya Diabetic Study Group (KDSG)

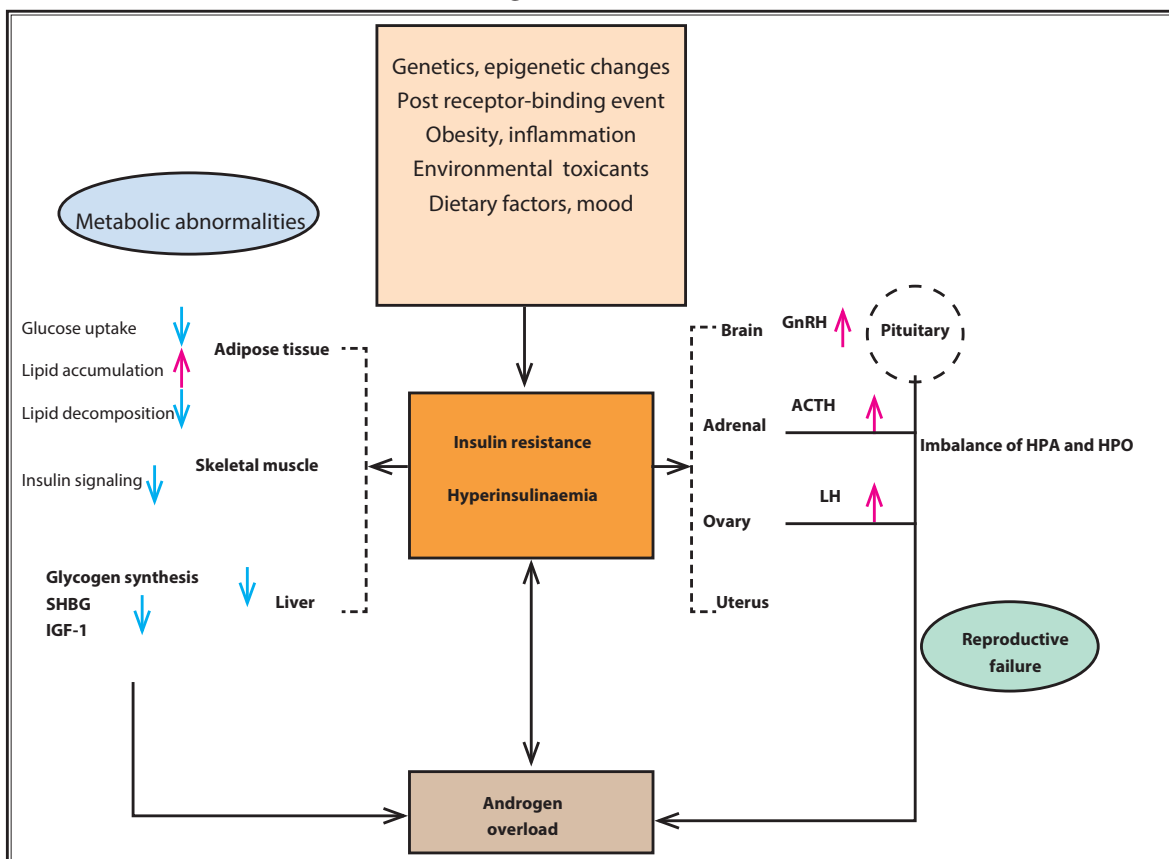
Address for Correspondence: Dr. Florence Keli. Email. florencekariithi@gmail.com

Abstract

Background: One in 10 women of reproductive age have Polycystic Ovary Syndrome (PCOS). Women with PCOS have dysfunctional ovaries

and body metabolism, excess adiposity and androgens. GLP1 RAs are approved for the management of T2DM and excess weight. They reduce systolic blood pressure LDL, triglycerides and total cholesterol modestly.

Pathogenesis of PCOS



Objectives: To evaluate the effects of GLP-1 RAs on IR, glucose metabolism, anthropometrics, lipids and androgens in women with PCOS and excess weight.

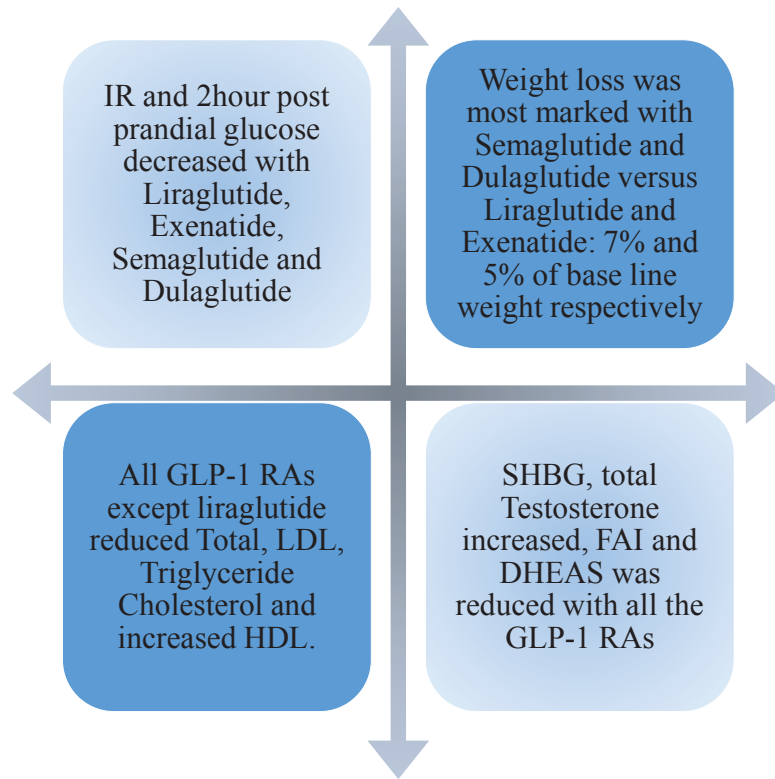
Methods: PubMed, EMBASE, EBSCO, Cochrane Library and MEDLINE were searched for relevant articles between January 2013 and December 2022.

Inclusion criteria: RCTs where overweight and obese women with PCOS, aged ≥ 18 years were given GLP1-RAs were included.

Exclusion criteria: Literature and systematic reviews, metaanalysis, RCTs in females ≤ 18 years, observational studies and non-English articles were excluded.

Data extraction and synthesis: Relevant data was extracted from RCTS. Quality assurance was assessed using the Critical Appraisal and Skills Program tool (CASP).

Results: *Selection of RCTS:* An initial electronic database search yielded 1012 articles. After screening titles and abstracts 56 articles were eligible for full-text review. Only 12 RCTs met the inclusion criteria and were reviewed systematically.



Conclusions:

- GLP RAs reduced blood glucose and IR in obese and overweight women with PCOS.
- Semaglutide and dulaglutide caused more weight loss compared to exenatide and liraglutide
- Hyperandrogenemia and dyslipidemia ameliorated with all the GLP-1 RAs.

Recommendations: GLP-1 RAs are potential add-on therapies for management of metabolic syndrome and cardiovascular risk factors in PCOS.

References

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