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Literature Review on Early PCOS Detection on Girl Child Using Artificial Intelligence or Machine Learning

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Abstract

Metabolic syndrome and polycystic ovarian syndrome (PCOS) are prevalent hormonal disorders affecting many women, often leading to long-term health complications. Timely and accurate diagnosis is crucial for effective treatment and prevention of further issues. However, traditional diagnostic methods can be inconsistent and may delay proper diagnosis. This study investigates the transformative potential of artificial intelligence (AI) in the detection, classification, and segmentation of PCOS and its correlation with metabolic syndrome. By leveraging AI's vast clinical data learning capabilities, we explore how AI can notify the main feature related with both conditions. The paper emphasizes AI's self-correcting ability, which facilitates continuous improvements in diagnostic accuracy. Through AI, enhance risk assessments for PCOS and related conditions like metabolic syndrome, enable earlier and more precise diagnoses, and ultimately increase individualized treatment plans tailored to each patient's unique needs. This research explores AI's potential in PCOS and metabolic syndrome, with the potential to revolutionize patient care and health outcomes.

Keywords: Metabolic Syndrome, Polycystic ovarian syndrome (PCOS), and Artificial Intelligence.

1. Introduction

Polycystic ovarian syndrome, or PCOS for short, is a condition that affects ovaries. It can cause a lot of different problems. PCOS pretty common, affecting many women of childbearing age. In fact, its occurrence can range from around 4% to as high as 20%, depending on how doctors diagnose it. Symptoms often include irregular periods, weight gain, and even issues like diabetes and infertility.

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