

Infantile uterus and uterine hypoplasia: a comprehensive overview to explore possible managements amidst limited scientific certainties.

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ABSTRACT

BACKGROUND: The uterus, a complex organ, performs crucial functions including fertilisation, embryonic implantation, and supporting fetal development. Infantile uterus, resembling a prepubescent girl's uterus, and uterine hypoplasia, characterised by a smaller than normal size but with a normal body/cervix ratio, present significant reproductive challenges.

OBJECTIVES: This study aims to critically review the existing literature on the infantile uterus and uterine hypoplasia, focusing on the aetiology, clinical features, diagnosis and treatment options.

METHODS: A comprehensive narrative review was conducted based on a thorough database search in PubMed, Google Scholar, Scopus, and Web of Science, complemented by cross-referencing relevant articles. Inclusion criteria included studies on the aetiology, clinical features, diagnosis, and treatment of infantile uterus and uterine hypoplasia.

MAIN OUTCOME MEASURES: Diagnostic criteria based on measurements and therapeutic options.

RESULTS: The review revealed distinct characteristics of infantile uterus and uterine hypoplasia. The infantile uterus has a body/cervix ratio of 1:1 or 1:2, resembling that of a prepubescent girl, while uterine hypoplasia maintains a normal body/cervix ratio of 2:1 but is smaller in size. Diagnostic criteria include a total uterine length of less than 6 cm and specific ultrasound features such as reduced intercornual distance. Therapeutic options include hormonal therapy, particularly oestrogen administration, and surgical interventions aimed at expanding the uterine cavity. Hormonal treatments showed variable effectiveness, primarily beneficial in cases of oestrogen deficiency, while surgical approaches demonstrated some success in enhancing fertility outcomes in women with a hypoplastic uterus.

CONCLUSIONS: Infantile uterus and uterine hypoplasia remain poorly understood, with no consensus on their aetiology. Accurate diagnosis relies on specific measurements and body/cervix ratios. Treatment options, including hormonal and surgical interventions, show limited success, indicating a need for further research to optimise management strategies.

WHAT IS NEW?: This review highlights the diagnostic challenges and the limited efficacy of current treatments for infantile uterus and uterine hypoplasia, emphasising the need for standardised diagnostic criteria and further research aiming to elucidate more effective therapeutic approaches.