VITAMIN D AND PHYSIOPATHOLOGY OF UTERINE LEIOMYOMAS: SYSTEMATIC REVIEW IN ANIMAL MODELS, IN VITRO STUDIES AND CLINICAL OBSERVATIONS

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Abstract

Background: Fibroids are benign tumors in women of reproductive age and associated with hormonal, genetic and molecular variables. Objectives: To search for the mechanisms by which vitamin D influences the development of fibroids. Search strategy: Electronic databases were searched from January 2009 to October 2019. The Internet search tool includes the PUBMED, COCHRANE and EMBASE search engines. Of these, scientific articles, meta-analyses, therapeutic guidelines, reviews, and research articles were consulted, as well as the most recent guidelines on the subject, according to the Brazilian Society of Gynecology. Selection criteria: The inclusion criteria were publications in the last ten years in English, Portuguese, and Spanish; publications that met the proposed objective described in PICO: a. Randomized trials; B. Observational studies (including cohort and case-control studies). Exclusion criteria included: articles published before 2010; languages other than English, Portuguese, and Spanish; articles that did not meet the research objectives; ongoing studies and abstracts. Data collection and analysis: The selected studies were divided according to the type of study and divided into: 1. Newcastle-Ottawa Scale-Case-Control Studies and Cohort Studies; 2. COCHRANE manual for systematic intervention reviews. Main results: 12 out of 15 studies were non-randomized studies (80%) with Kappa values above six. Kappa agreement was 0.615, suggesting good or substantial agreement. Conclusion: Vitamin D (1,25(OH)2 D3) plays a significant role in cell growth control, programmed cell death, and DNA damage. Low levels of Vitamin D seem to be an important factor, direct or indirectly, in the etiopathogenesis of uterine fibroids.

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