

Potential health benefits of curcumin on female reproductive disorders: A review

ABSTRACT

Curcumin is one of the main polyphenolic compounds in the turmeric rhizome. It possesses antioxidant, anti-inflammatory, anti-cancer, anti-arthritis, anti-asthmatic, anti-microbial, anti-viral and anti-fungal properties. This review aims to provide an overview of the potential health benefits of curcumin to treat female reproductive disorders, including polycystic ovary syndrome (PCOS), ovarian failure and endometriosis. Comprehensive information on curcumin was retrieved from electronic databases, which were MEDLINE via EBSCOhost, Scopus and Google Scholar. The available evidence showed that curcumin reduced the high level of androgen in PCOS. Studies in rodents suggest that curcumin resulted in the disappearance of cysts and the appearance of healthy follicles and corpora lutea. Furthermore, animal studies showed curcumin improved the overall function of the ovary in ovarian diseases and reversed the disturbance in oxidative stress parameters. Meanwhile, in vitro and in vivo studies reported the positive effects of curcumin in alleviating endometriosis through anti-inflammatory, anti-proliferative, anti-angiogenic and pro-apoptotic mechanisms. Thus, curcumin possesses various effects on PCOS, ovarian diseases and endometriosis. Some studies found considerable therapeutic effects, whereas others found no effect. However, none of the investigations found curcumin to be harmful. Curcumin clinical trials in endometriosis and ovarian illness are still scarce; thus, future studies need to be conducted to confirm the safety and efficacy of curcumin before it could be offered as a complementary therapy agent.