

Valeriana officinalis is Effective on Stress-Induced Infertility, Delayed Maternity, and Intrauterine Growth Restriction of the Fetus in Female Rats

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SUMMARY. Infertility is a tragic option for reproductive-aged women. About 20 % of lost ability to conceive are caused by unexplained etiology. Some of these cases are linked with psychological stress. It can cause depression and anxiety, and the latter can cause infertility. The therapy with sedative, antidepressant, anxiolytic and antioxidant effects may be beneficial in preventing infertility caused by psychological disorders and maintaining normal intrauterine physical development of the fetus. The aim of our study is to investigate the protective effect of *Valeriana* plant root extract against stress-induced reproductive disorders. The protective effect of *Valeriana* plant root extract against infertility and delayed maternity was investigated in a stress model induced by the forced immobilization method in albino Wistar female rats and compared with ascorbic acid. *Valeriana officinalis* plant root extract was effective against psychological stress-related infertility and delayed maternity, ascorbic acid was found to be ineffective. This information suggests that psychological stress-related ovarian damage, infertility, delayed maternity, and great obstetric syndromes are based on the role of psychological disorders such as anxiety and depression rather than oxidative stress. Our experimental results indicate that *Valeriana officinalis* plant root extract can be useful in the treatment of stress-related ovarian damage and reproductive disorders.

RESUMEN. La infertilidad es una opción trágica para las mujeres en edad reproductiva. Aproximadamente el 20% de la capacidad para concebir perdida se debe a una etiología inexplicable. Algunos de estos casos están relacionados con el estrés psicológico. Puede causar depresión y ansiedad, y esta última puede causar infertilidad. La terapia con efectos sedantes, antidepressivos, ansiolíticos y antioxidantes puede ser beneficiosa para prevenir la infertilidad causada por trastornos psicológicos y mantener el desarrollo físico intrauterino normal del feto. El objetivo de nuestro estudio es investigar el efecto protector del extracto de raíz de la planta de *Valeriana* contra los trastornos reproductivos inducidos por el estrés. El efecto protector del extracto de raíz de la planta de *Valeriana* contra la infertilidad y la maternidad retrasada se investigó en un modelo de estrés inducido por el método de inmovilización forzada en ratas hembra albinas Wistar y se comparó con ácido ascórbico. El extracto de raíz de *Valeriana officinalis* fue eficaz contra la infertilidad relacionada con el estrés psicológico y el retraso de la maternidad, se descubrió que el ácido ascórbico no era eficaz. Esta información sugiere que el daño ovárico relacionado con el estrés psicológico, la infertilidad, la maternidad retrasada y los grandes síndromes obstétricos se basan en el papel de los trastornos psicológicos como la ansiedad y la depresión más que en el estrés oxidativo. Nuestros resultados experimentales indican que el extracto de raíz de la planta de *Valeriana officinalis* puede ser útil en el tratamiento del daño ovárico y trastornos reproductivos relacionados con el estrés.

KEY WORDS: infertility, maternity, rat, stress, *Valeriana officinalis*

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