NSAIDs may impair fertility in women with mild musculoskeletal pain. Damage is reversible once NSAIDs are discontinued, according to a new study.

NSAIDs appear to have harmful effects on the fertility of women with mild musculoskeletal pain, according to a new study.

The results, presented at the 2015 European League Against Rheumatism (EULAR) Congress in Rome, Italy, suggest that NSAIDs inhibit ovulation and reduce progesterone levels in young women. The damage, however, is reversible once a woman stops taking NSAIDs.

There have been recent concerns about NSAID use in women of childbearing age, since many animal studies showed unfavorable effects on ovulation, noted lead author Sami Salman, MD, from the University of Baghdad.

Salman and colleagues evaluated 39 women of childbearing age who presented to a rheumatology clinic in Baghdad with minor back pain. The women received 1 of 3 test drugs: diclofenac 100 mg per day, naproxen 500 mg twice daily, or etoricoxib 90 mg per day. A fourth group received no treatment.

The volunteers took the drugs for 10 days starting at day 10 of the onset of their menstrual cycle. A blood sample was taken for hormonal analysis of progesterone levels, which are known to be affected by NSAIDs, together with an ultrasound scan to assess the mean diameter of the dominant follicle.

At day 20 of their menstrual cycles, the women came back for another ultrasound exam and a check of progesterone levels.

“There was significant inhibition of ovulation in patients treated with diclofenac, naproxen, and etoricoxib,” said Dr Salman. “Diclofenac was the highest inhibitor of ovulation compared to the other two drugs.”

The dominant follicle remained unruptured in three-quarters of women who took diclofenac, one-quarter of those who took naproxen, and one-third of women who took etoricoxib. None in the control group had an unruptured follicle.

In the treated women, researchers noted a significant decrease in progesterone, essential for ovulation and implantation of a fertilized embryo.

About one-third of patients developed a functional cyst due to the unruptured follicle, he said. The number of cysts was similar in the diclofenac (3), naproxen (5), and etoricoxib (6) groups. These cysts disappeared at the next menstrual cycle.

After discontinuing NSAIDs, all the women ovulated normally during the next cycle, he said.

“The findings may serve as an alarm of the harmful effects of these drugs on female fertility and be taken into consideration in females planning to have a child,” Dr Salman said.

He noted that the results may open the door for an emergency contraceptive that is safer than those currently available.
References:

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