

Antidepressants may harm male fertility

- 24 September 2008
- Peter Aldhous



ANTIDEPRESSANTS taken by millions of men could be impairing their fertility by causing damage to the DNA in their sperm.

In 2006, Peter Schlegel and Cigdem Tanrikut of the Cornell Medical Center in New York City reported that two men had developed low counts of healthy sperm after taking two different selective serotonin-reuptake inhibitors (SSRIs), the most commonly prescribed class of antidepressant.

Now Schlegel's team has given 35 healthy men doses of a third SSRI called paroxetine, sold as Seroxat or Paxil, over five weeks, and examined their sperm before treatment and four weeks in.

Superficially, the men's sperm seemed healthy - amounts of sperm and semen, and the shape and motility of sperm, were all normal. But when the team looked at DNA fragmentation in the sperm, using the TUNEL method, a worrying picture emerged. On average, the proportion of sperm cells with fragmented DNA rose from 13.8 per cent before taking paroxetine to 30.3 per cent after just four weeks.

Similar levels of sperm DNA damage have been linked to problems with embryo viability. For example, in couples undergoing IVF, studies have found that where the man has more sperm with damaged DNA, fewer embryos form and those that do are less likely to implant successfully into the woman's uterus. As a result, fertility specialists regard a fraction of 30 per cent of sperm with DNA damage as being "clinically significant", says Douglas Carrell, a specialist in male infertility at the University of Utah in Salt Lake City.

Schlegel's team is concerned that some men currently taking SSRIs may be suffering damage to their fertility. The team will present its results in November at a meeting of the American Society for Reproductive Medicine in San Francisco, California.

Janet Morgan, a spokeswoman for GlaxoSmithKline, which sells paroxetine, says: "This study was not conducted by GSK, and therefore we are currently reviewing the investigators' findings. We take seriously our responsibility to ensure our medicines are used safely."

Schlegel's results have come as no great surprise to some researchers, however. "I think a lot of us around the world have had data that have pointed in this direction and have been suspicious," says Carrell.

He says that Schlegel's work is a "good preliminary study" but adds that studies of the longer term effects of SSRIs on sperm are also necessary.

SSRIs are known to slow the movement of sperm through the male reproductive system, an effect that has been exploited to help treat premature ejaculation. Schlegel believes that this extra time spent travelling from the testes causes sperm to accumulate DNA damage.

So should men taking SSRIs whose partners are struggling to conceive come off their drugs for a while? Given that untreated depression may create a suicide risk, that is a tough call to make. "I think it's a case-by-case decision," says Carrell. Men in this position "definitely need to work very closely with their mental health provider".

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From issue 2675 of New Scientist magazine, 24 September 2008, page 11
Printed on Wed Sep 24 22:49:15 BST 2008