Study finds convincing evidence that the combined oral contraceptive pill helps painful periods

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A large Scandinavian study that has been running for 30 years has finally provided convincing evidence that the combined oral contraceptive pill does, indeed, alleviate the symptoms of painful menstrual periods – dysmenorrhoea. The research is published online in Europe's leading reproductive medicine journal *Human Reproduction* today.

Although some previous studies and anecdotal evidence have suggested that the combined oral contraceptive pill could have an impact on painful periods, a 2009 review of all the available research by the prestigious Cochrane Collaboration concluded that there was limited evidence for pain improvement.

The new findings by Dr Ingela Lindh and her colleagues at the Institute of Clinical Sciences, Sahlgrenska Academy at Gothenburg University, Sweden, show that women who used the combined oral contraceptive pill suffered less severe pain compared with women who did not use it. Young women often seem to suffer more from painful periods than older women, and the researchers also found that increasing age did alleviate the symptoms, but the effects of pill use and age were independent of each other, with the pill having a greater effect.

The researchers questioned three groups of women who reached the age of 19 in 1981, 1991 and 2001. Each group included approximately 400 to 520 women, who provided information on their height, weight,

reproductive history, pattern of menstruation and menstrual pain, and contraceptive use. Five years later they were assessed again at the age of 24.

By comparing the same women at two different ages, the researchers were able to use each woman as her own control, enabling them to establish whether any reduction in severity of symptoms was due to combined oral contraceptive (COC) use or increasing age.

Dr Lindh, who is also a registered nurse and midwife, said: "By comparing women at different ages, it was possible to demonstrate the influence of COCs on the occurrence and severity of dysmenorrhoea, at the same time taking into account possible changes due to increasing age. We found there was a significant difference in the severity of dysmenorrhoea depending on whether or not the women used combined oral contraceptives."

Pain and other symptoms were measured by two different scales: VMS (verbal multidimensional scoring system), which grades pain as none, mild, moderate or severe, and also takes into account the effect on daily activity and whether any painkillers were required; and VAS (visual analogue scale), where a woman can grade her degree of pain on a 10 cm line that starts with "no pain at all" and ends with "unbearable pain".

Dr Lindh said: "We found that combined oral contraceptive use reduced dysmenorrhoea by 0.3 units, which means that every third woman went one step down on the VMS scale, for instance from severe pain to moderate pain, and which meant that they suffered less pain, improved their working ability and there was a decrease in the need for analgesics. On the VAS scale there was a reduction in pain of nine millimetres."

Independent of the effect of COC use, the researchers found that increasing age reduced the severity of dysmenorrhoea but not as much as

COC did; it shifted women down 0.1 units on the VMS scale and five millimetres on the VAS scale. Childbirth also seemed to reduce the severity of symptoms, but this result was limited by the fact that very few women had given birth between the ages of 19 and 24.

The researchers also found that in the youngest group (those born in 1982), more women reported suffering from painful periods, and the severity of the symptoms was worse.

"We are unsure why this is," said Dr Lindh. "It may be due to changes in the type of oral contraceptive used, for example, differences in oestrogen content and progestogen type, or a different appreciation of pain in the women born in later years, in that they may be more pain sensitive or are more prepared to complain about pain than women of the same age but born earlier."

Dysmenorrhoea has been estimated to account for 600 million lost working hours and two billion dollars in lost productivity in the USA. Dr Lindh said: "Painful periods occurs frequently, particularly in young women where as many as 50-75% suffer from dysmenorrhoea. It can have a detrimental effect on these women's lives, causing regular absenteeism from school and work, and interfering with their daily activities for several days each month. Therefore effective management of dysmenorrhoea is beneficial for both the women affected and society.

"Information about the effects of COC use on painful periods should be included in contraceptive counselling, as it has been shown that women who experience a beneficial effect of COCs other than contraception, such as a reduction in dysmenorrhoea, are more likely to continue with the pill."

At present, the combined oral contraceptive pill is approved for contraception by regulatory authorities such as the European Medicines

Agency (EMA) and the US Food and Drug Administration (FDA), and they would require a randomised controlled trial to in order to include dysmenorrhoea treatment as another indication for COC use, although some doctors already prescribe it "off-label" to help with painful periods.

Dr Lindh said: "We are aware that drug companies have discussed with the authorities the possible design of a randomised controlled trial for the evaluation of COCs in the treatment of dysmenorrhoea but this has not yet been finalised or performed. However, our study has clearly indicated a beneficial influence of COCs on the prevalence and severity of dysmenorrhoea and the absence of a randomised controlled trial confirming this in no way reduces the value of this information."

More information: "The effect of combined oral contraceptives and age on dysmenorrhoea: an epidemiological study", by Ingela Lindh, Agneta Andersson Ellström, and Ian Milsom. Human Reproduction journal. doi:10.1093/humrep/der417

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