Blood clots, COVID-19 vaccines and the contraceptive pill: are we heading for a repeat of the 1995 pill scare?

There has been a wealth of media coverage regarding venous thromboembolism (VTE) following certain types of COVID-19 vaccines in the mainstream media and online. To put the risk into perspective for the general public, many journalists, authors and even scientific journals have used the risk of VTE associated with 'the contraceptive pill' and air travel as comparators. While this may be well-meaning, it is an unjust comparison and may have unintended consequences on contraceptive use and unplanned pregnancies.

Such alarming headlines can be emotive to contraceptive users. VTE associated with hormonal contraceptive use generally relates to deep vein thrombosis and pulmonary embolism, which is quite a different clinical picture to the cerebral venous sinus thromboses (CVST) being reported in individuals receiving the AstraZeneca vaccine that also appear to arise by a different mechanism.[1] The complications are neither similar conditions, nor have similar outcomes with CVST, being associated with much higher mortality than combined hormonal contraception (CHC)-related VTE. In addition, such a comparison does not make any distinction between CHC, which does carry a 2–5-fold increased risk of VTE, and progestogen-only pills, which do not increase the background risk.[2] Furthermore, while CHC does increase an individual's risk of VTE, it reduces the overall number of episodes of VTE in the population and healthcare-related spend due to the reduction in the number of pregnancies, which are associated with a risk of VTE greater than that of a CHC user.[3]

To evaluate how such headlines may impact contraceptive behaviours, an informal online poll of social media users was conducted on 18 April 2021 via the Instagram account @gynaegeek, which is followed by over 148 000 predominantly UK-based females. The poll, available for 24 hours, posed the question: "A quick question to all contraceptive pill users: Have the discussions about blood clots and COVID-19 vaccines and the comparison between blood clots and the contraceptive pill caused you to actually stop or consider stopping your pill?".

From a total of 10 193 responses, 38% responded 'Yes' (n=3853) and 62% responded 'No' (n=6340).

In October 1995, the UK Committee on Safety of Medicines issued a warning that use of third-generation combined oral contraceptive pills (COCPs) containing gestodene or desogestrel carried a greater VTE risk than COCPs containing other progestogens. Prior to this, the trend in conception rates in England and Wales had been decreasing since 1990, yet in 1996 there were 26 000 more conceptions than in 1995, with an increase of 7%, 4% and 2%, respectively, in the first three quarters of the year, compared with the same periods in the previous year. Furthermore, data relating to abortions demonstrated that an additional 13 601 pregnancies were terminated in the same year: an increase of 8% from 1995. Again, this was in stark contrast to the progressive decline in abortion rates recorded since 1990.[4]

While contraceptive users deserve to be fully informed about the risks and benefits of the various contraceptive types, representation of these in the media should not result in a negative impact on public health, as was clearly inferred by the spike in conception and termination rates seen in 1996.

Based on the responses of the 10 193 social media users, we may observe an increase in the number of women wishing to discontinue hormonal contraception in the light of the recent headlines. It is important for clinicians and contraceptive providers to be aware of the ideas and opinions of contraceptive users so that we can adequately address their concerns and ensure they have access to information regarding effective alternative options in a bid to subvert a repeat of the health impact demonstrated by the 1995 pill scare.

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Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

Patient consent for publication Not required.

Provenance and peer review Not commissioned; internally peer reviewed.

Published Online First 22 June 2021

BMJ Sex Reprod Health 2021;**47**:303–304.
doi:10.1136/bmjsrh-2021-201219

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