LETTER TO EDITOR

The Risk of Venous Thromboembolism Associated with Oral Contraceptive; the Search Is Still On

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Dear editor:

A few years after coming to the market, the first generation of oral contraceptive pills (OCPs) were linked to significant risk of venous thromboembolism (VTE). This increased risk was blamed on the presence of the estrogen-like compounds in these agents. Therefore, the efforts were initiated to decrease the VTE risk of OCPs by lowering the delivered estrogen content by adding progestins such as levonorgestrel to these products, which led to production of the second generation of OCPs. Thereafter, the third generation of these agents with lower doses of progesterone-like compounds with contraceptive efficacy was released. They contain the new progestins such as Drospirenone, Norgestimate, Desogestrel and Gestodene (1-3).

Baratloo et al. review article (The Risk of Venous Thromboembolism with Different Generation of Oral Contraceptives) is a good systematic review of the current evidence and concluded that taking second and third-generation OCPs increases the risk of VTE up to 3 and 4.3 fold, respectively (4). Looking at the results of few other recent publications on the same subject reveals that risk of VTE from oral contraceptives is more significantly associated with both estrogen dose and duration of use rather than progesterone type. The safest OCPs in terms of VTE are those containing levonorgestrel or norgestimate and the risk of VTE associated with desogestrel, drospirenone or cyproterone acetate containing OCPs is greater than that associated with OCPs containing levonorgestrel. It is important to note the increase in VTE due to third generation progestin pills was not associated with Norgestimate but the increased risk was demonstrated with Desogestrel and Gestodene (5-8).

The trend of this potentially lethal side effect of OCPs needs to be viewed in the light of two facts: 1) nowadays, the use of OCPs is not limited to contraception and we put patients on these medications for a plethora of medical condition. On top of that, global socioeconomical changes has increased the number of women who have access to OCPs as well as the number of years these medications are taken continuously. 2) Our advances in technology has given us the chance to be able to diagnose (and sometimes over diagnose!) some medical conditions such as VTE. This would certainly affect the way we look at the medications and their side effects.

Nevertheless, OCPs, as an integral part of the modern medicine and today's lifestyle, are not completely safe and to make them a safer choice for patients, the search is still on.

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