SEXUAL DYSFUNCTION

PDE5i and melanoma

—correlation is not causation

Recent research has questioned the possibility of a relationship between phosphodiesterase type 5 inhibitor (PDE5i) use for erectile dysfunction and the development of malignant melanoma.

Stacy Loeb, lead author of the study, told *Nature Reviews Urology* “A paper published last year suggested a relationship between use of sildenafil (Viagra, Pfizer Inc. USA) and developing melanoma, which received a lot of publicity and lead to many patients expressing concern over whether erectile dysfunction drugs could cause melanoma.” She continued “Our goal was to look more closely at this issue in a larger population from Sweden, which has a national health system. Thus, we were able to access prescription records for men across the entire country, which we linked to the national registries for melanoma.”

“...the data suggests that this relationship is unlikely to be causal”

This investigation included data from 4,065 men diagnosed with melanoma, 11% of whom had filled prescriptions for a PDE5i, 8% of the 20,325 controls also had a filled prescription. Multivariable analysis showed that PDE5i use was modestly but significantly associated with an increased risk of melanoma. However, further analysis revealed that, although the risk of melanoma was significant for men who had a single filled prescription, this trend did not continue in men

with multiple filled prescriptions. PDE5i drugs were found to be significantly associated with melanoma stages 0 and I but not with higher cancer stages. Significant associations between melanoma risk and marital status, high educational level and high income were also observed.

Loeb explained “Although there is an association between erectile dysfunction medications and melanoma, a closer look at the data suggests that this relationship is unlikely to be causal,” continuing “if these drugs caused melanoma, you would expect that the more prescriptions a man had, the greater the risk of melanoma and that there would be a relationship with more aggressive disease, but this was not the case. You would also expect that longer-acting drugs would increase the risk of melanoma and this was not the case either.”

Together, these results indicate a relationship between development of melanoma and use of PDE5i drugs is not likely; Loeb concluded: “Although it is unlikely that erectile dysfunction medications cause melanoma and other skin cancers, the men who take these medicines are still at risk. Regular skin checks, avoiding blistering sunburn and using sunscreen and other sun protection are important to reduce the risk of skin cancer.”

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Original article Loeb, S. *et al.* Use of phosphodiesterase type 5 inhibitors for erectile dysfunction and risk of malignant melanoma. *JAMA* doi:10.1001/jama.2015.6604