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New study shows increased risk of venous thromboembolism among NSAIDs users

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A new study published online today in the journal *Rheumatology* demonstrates that there is a statistically significant increased risk of venous thromboembolism (VTE) – a condition which includes deep vein thrombosis and pulmonary embolism – among users of non-steroidal anti-inflammatory drugs (NSAIDs). This finding has important public health implications given the prevalence of NSAID use in the general population.

NSAIDs are one of the most commonly used medications around the world, and they are already well-known for their potential adverse effects. However, the epidemiological data on the risk of VTE among NSAIDs users is limited. In this new study, a team of researchers led by Patompong Ungprasert of Bassett Medical Centre, New York, conducted a systematic review and meta-analysis of observational studies that compared the risk of VTE in NSAID users versus non-users.

Six studies (one cohort study and five case-control studies) with 21,401 VTE events were included in the analysis, which demonstrated a statistically significant increased VTE risk among subjects who used NSAIDs, with an overall 1.80-fold increased risk compared with subjects who did not use NSAIDs.

The study's lead author, Patompong Ungprasert, comments: "This is the first systematic review and meta-analysis of published observational studies assessing the risk of VTE among NSAIDs users. There are some limitations, however, such as the fact that all NSAIDs are evaluated as

one group in this study but not all individual NSAIDs may increase the risk of VTE.

"Our results show a statistically significant increased VTE risk among NSAIDs users. Why NSAIDs may increase the risk of VTE is unclear. It is possibly related to COX-2 inhibition leading to thromboxane-prostacyclin imbalance. Physicians should be aware of this association and NSAIDs should be prescribed with caution, especially in patients already at a higher risk of VTE."

More information: 'Non-steroidal anti-inflammatory drugs and risk of venous thromboembolism: A systematic review and meta-analysis' by Patompong Ungprasert, Narat Srivali, Karn Wijarnpreecha, Prangthip Charoenpong, Eric Knight *Rheumatology*, DOI: 10.1093/rheumatology/keu408

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