

## **Editorial: rising rates of venous thromboembolism (VTE) among hospitalized patients with Inflammatory Bowel Disease (IBD) in the USA**

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Venous thromboembolism (VTE) is a major cause of morbidity and mortality worldwide. Among multiple known risk factors are chronic conditions such as inflammatory bowel disease (IBD). In a recent study, Faye *et al.* analysed annual rates of “VTE-associated hospitalisations” among IBD patients using U.S. administrative data (National Inpatient Sample [NIS], 2000 – 2018). The report shows a potentially alarming temporal trend, rising from 192 to 295 cases per 10,000 admissions.<sup>1</sup> The authors report no temporal increase for a comparator group of patients with coeliac disease, concluding that the rise is “unique to IBD”. To further support that conclusion, they cite studies showing no generalised increase in VTE admissions among general populations.

However, the cited studies were not based on the NIS dataset. Overall rates of VTE-associated hospitalisations are not reported, making it difficult to place the findings in context of general time trends in the NIS population. Increasing hospitalisations for VTE have been described within the NIS population over a comparable period (2003 – 2013),<sup>2</sup> and other condition-specific studies have reported a rise.<sup>3,4</sup> The reported increase in VTE rate was seen in base-case analysis, where all elective or emergent admissions with codes for IBD and VTE were included. A condition-specific sensitivity analysis, restricted to emergency cases with a primary diagnosis of IBD, revealed no such rise.

So, the assertion of a “unique” rise in VTE among patients with IBD *per se* is not entirely convincing. It’s conceivable that this is not IBD-specific and reflects general trends in casemix and prevalence of VTE risk factors. The paper provides a wealth of interesting data on factors associated with VTE among inpatients who have a history of IBD. Changes in prevalence of these factors are potential drivers of VTE trends. The authors allude to increasing age as one potential explanation. However, no data are presented for time trends in age profile or other risk factors to allow interpretation of what might be driving the apparent increase.

The authors emphasize the base-case analysis and rising VTE rates, arguing that changes to diagnosis or coding practices are unlikely explanations. Perhaps more compelling is the static rates seen among emergency admissions with a primary diagnosis of IBD. This suggests either a failure of hospitals to reduce avoidable VTE after admission, or a rise in admission of people with established or unavoidable VTE. The former explanation would be cause for particular concern. Over the period 2005-2013, we

reported a reduction in emergency readmissions to English hospitals for VTE following an index emergency admission for ulcerative colitis.<sup>5</sup> This was consistent with some positive impact from generic, health service-wide measures to reduce VTE and from IBD-specific quality improvement drive focused on thromboprophylaxis.

Regardless of whether rates of VTE among hospitalized IBD patients in the USA are genuinely increasing, or simply failing to decline over time, this paper highlights the need for vigilance and continued efforts to minimise avoidable VTE events.

## References

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