

Editorial Commentary: A Patient-Specific Approach to Preventing Venous Thromboembolism After Hip Arthroscopy Is Essential



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Abstract: The incidence of hip arthroscopy (HA) has seen a dramatic rise over the past decade, with a bimodal distribution of patient age with peaks at both 18 and 42 years of age. Thus, it is essential to reduce complications, including venous thromboembolism (VTE), given reported incidences as high as 7%. Fortunately, more recent research, perhaps reflecting an evolution resulting in lower HA surgical traction times, has shown a VTE incidence of 0.6%. Perhaps because of such a low rate, recent research has also shown that generally, thromboprophylaxis does not significantly decrease the odds of VTE. The strongest predictors of VTE after HA are oral contraceptive use, prior malignancy, and obesity. Rehabilitation is also an important factor as some patients are ambulatory on postoperative day 1, reducing the VTE risk, whereas others require a few weeks of protected weight bearing, increasing their risk. A patient-specific approach to VTE prevention after HA, rather than a one-size-fits-all approach, is essential.

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The incidence of hip arthroscopy (HA) has seen a dramatic rise over the past decade, with a bimodal distribution of patient age with peaks at both 18 and 42 years of age.¹ Given this increase in incidence, minimizing complication rates associated with HA has received increased attention. In particular, surgeons are cognizant of the need to minimize the risk of venous thromboembolism (VTE) given reported incidences as high as 7% in certain studies.^{2,3} In their study, "Incidence of Venous Thromboembolism After Hip Arthroscopy Is Low With or Without Prophylaxis but Risk Factors Include Oral Contraceptive Use, Obesity and Malignancy," Holler, Halvorson, Salesky, Ma, Feeley, Leavitt, Lansdown, and Zhang⁴ have essentially asked what the incidence and risk factors are for VTE after HA and whether thromboprophylaxis use mitigates these risks.

Holler et al.⁴ have performed an excellent retrospective review of 60,161 patients, 0.6% of whom experienced symptomatic VTE. These findings are interesting in that they clearly contradict those of some older studies that have shown VTE rates ranging from 5% to 7%.^{2,5} However, the large and robust sample size in this study likely represents a truer estimate of the deep venous thrombosis (DVT) rate compared with these previous studies. From a pathophysiology standpoint, the increased risk of DVT with HA is likely due to a combination of reduced blood flow owing to immobility and increased venous pressure owing to hip traction.⁶ Therefore, it is possible that as HA has evolved over the years and resulted in lower surgical traction times, the risk of DVT has reduced as well.⁷

More interesting, the authors showed that thromboprophylaxis use was not significantly associated with decreased odds of experiencing VTE; however, after adjustment for prophylaxis use, the strongest predictors of VTE were oral contraceptive use, prior malignancy, and obesity, respectively. These findings are critical in that they clearly demonstrate the importance of a patient-specific approach as opposed to a one-size-fits-all approach. This concept of using a patient-specific approach has become increasingly popular in the orthopaedic community over the past decade as seen with anterior cruciate ligament reconstruction surgery,

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rotator cuff surgery, and so on. Therefore, as discussed in our previous editorial commentary, our group does not routinely prescribe VTE prophylaxis for HA; we instead recommend referring patients with any important risk factors including prior VTE, prior malignancy, oral contraceptive use, and significant obesity, among others, to see our hematology colleagues for their recommendations.⁸

Another important factor to consider when using a patient-specific approach is the specific type of HA procedure being performed and the planned rehabilitation protocol. For example, if a patient undergoes a more extensive procedure and we anticipate the need for protected weight bearing for a few weeks, we may lean more toward prophylaxis use when compared with a patient who will be ambulatory on the first postoperative day.

Overall, the results of the study by Holler et al.⁴ and the state of the literature on HA in general point toward one glaringly obvious knowledge gap: consensus and evidence-based guidelines that are readily available to patients undergoing HA. The authors of this study provide us with an excellent stepping stone in the right direction; however, with the multitude of prospective HA registries that exist across the globe and the increasing number of prospective trials on HA, it is imperative for us to continue to analyze and critically appraise the data we already have to attain robust treatment recommendations.

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