PROSTATE CANCER

Non-O blood type is VTE risk factor after radical prostatectomy

After radical prostatectomy, the risk of venous thromboembolic events (VTEs)—which are the most common nonsurgical complication, representing the most common cause of death within 30 days of surgery—is greater in men with non-O blood type than those with O blood type, according to a recent review of 18,472 men who underwent radical prostatectomy with pelvic lymphadenectomy at a single institution from 1987 to 2010.

Tollefson *et al.* identified symptomatic VTEs in 271 (1.4%) of these patients and found that, although the diagnosis of VTE

was not associated with factors such as preoperative BMI, PSA, Gleason score, or cancer recurrence, it was significantly associated with non-O blood type (OR 1.98, $P=0.004$), as well as increasing number of lymph nodes removed (OR 1.05, $P=0.035$) and need for blood transfusion (OR 1.30, $P=0.02$), suggesting that men with these risk factors should receive individualized VTE prophylaxis.

Men undergoing radical prostatectomy are already at an increased risk of VTEs, and many of these patients have several VTE risk factors. Surgery for malignancy is associated with a 5–7-fold increase in the risk of VTEs, and older patients are more likely to experience thrombotic complications. In a recent review of NSQIP data, prostatectomy was associated with a 2.5-fold increased risk of VTEs within 30 days when compared with breast surgery. In fact, ultrasonography studies suggest that the rate of VTEs might be as high as 20% after radical prostatectomy.

However, although effective mechanical and chemical prophylaxes exist for VTEs,

prophylaxis is associated with an increased risk of complications such as postoperative bleeding and lymphocele formation after radical prostatectomy, so the risks and benefits of prophylaxis need to be weighed carefully against one another in these men.

“Current AUA guidelines suggest VTE prophylaxis in all patients during hospitalization. One difficulty we have with prostatectomy is that the hospitalization period is just 1–2 days and it is unclear whether prophylaxis over this short period of time is worthwhile,” Matthew Tollefson told *Nature Reviews Urology*. “If our findings are confirmed at other centres, one could consider changes to the guidelines for longer-term prophylaxis after hospital dismissal for patients deemed to be at high risk of VTE.”

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Original article Tollefson, M. K. *et al.* Blood type, lymphadenectomy and blood transfusion predict venous thromboembolic events following radical prostatectomy with pelvic lymphadenectomy. *J. Urol.* doi:10.1016/j.juro.2013.10.062

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