

# In colorectal surgery, risk for blood clots appears higher with open method versus laparoscopy

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The risk of developing venous thromboembolism (VTE) may be nearly twice as high for patients undergoing open surgery for colorectal problems, versus those undergoing laparoscopic colorectal (LC) resections, according to a report in the June issue of *Archives of Surgery*.

Venous thromboembolism (the formation of [blood clots](#) in the [veins](#)) occurs in up to 25 percent of patients who undergo surgery without specific steps taken to prevent the condition, according to background information in the article. The authors note that colorectal surgery in particular carries a high risk for VTE. They also point out that prior research in a few common gastrointestinal procedures suggests that laparoscopic surgery is associated with fewer cases of VTE. "An improved knowledge of the risk factors in the development of VTE after LC compared with open colorectal (OC) resection," they write, "may help guide surgeons' selection of appropriate thromboprophylaxis in patients undergoing LC surgery."

Brian Buchberg, M.D., and colleagues from University of California - Irvine Medical Center, Orange, compared the risk of VTE procedures by examining the National Inpatient Sample database. Between January 2002 and December 2006, in the United States, 149,304 patients underwent elective colectomy. [Laparoscopic](#) surgeries were performed in 5.3 percent of the total (7,848).

Among patients undergoing elective colectomies, VTE occurred in 1.4 percent (2,102). Sixty-five of those cases were in the LC group, versus 2,036 in the OC group, a significant difference. When the researchers analyzed the sample to stratify patients by risk factors, the odds of developing VTE were nearly twice as high in the OC group, compared with the LC group.

The authors note that their results appear to reflect the odds of OC-associated VTE that have been seen in other gastrointestinal surgical procedures. The apparent disparity between the methods leads them to "call into question whether we should be using the same risk factors and stratification for LC procedures as we do for OC procedures because certain [risk factors](#) for VTE in a patient undergoing OC surgery do not seem to portend an increased risk of VTE in the same patient undergoing LC surgery," they write. "These study findings may be used by surgeons to more accurately assess a patient's risk for perioperative VTE as well as to select appropriate thromboprophylaxis in patients undergoing LC surgery."

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