

## Oral contraceptives, ABO blood types and thromboembolism

An interesting article in *CMAJ* by Sode and colleagues<sup>1</sup> reported that in groups of patients with increased susceptibility to thromboembolic disease because of factor V Leiden R 5062 or prothrombin mutation G 20210A, the highest incidence of disease occurred in patients with A, B or AB blood types. In previous studies,<sup>2-4</sup> we reported that among 348 women treated with various oral contraceptive agents and observed for 5877 months, thromboembolic complications occurred only in patients with preexisting blood coagulation deficiencies, but all patients had A or AB blood types.

The coagulation deficiencies we observed produced no clinical problems until oral contraceptives were initiated. Abnormalities included increased levels of factors V, VII, VIII, II (prothrombin) or its mutations or decreased levels of plasminogen or combinations of these pathologies. The question is whether patients should be tested for factors of the blood coagulation and fibrinolysis systems as well as blood groups before starting oral contraceptive therapy. Although the incidence of thromboembolism in these patients is relatively low, and the tests are expensive, the potential of serious complications in otherwise healthy women may warrant testing. Positive findings may justify consideration of other methods of pregnancy prevention, or of the use of oral contraceptives with the lowest estrogen concentrations, which have the lowest risk of thromboembolic complications.

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### References

1. Sode BF, Allin KH, Dahl M, et al. Risk of venous thromboembolism and myocardial infarction associated with V Leiden and prothrombin mutations and blood type. *CMAJ* 2013;185:E229-37.
2. Ambrus CM, Lillie MA, Akhter S. Studies on oral contraceptives and thromboembolism. *J Med* 2006; 37:117-28.
3. Ambrus MS, Mink IB. ABO blood types and fac-

tors of the blood coagulation and fibrinolysis systems in women. *J Med* 1970;1:236-41.

4. Lillie MA, Mink IB. Progestational agents and blood coagulation VI relationship of abo blood types to changes induced by oral contraceptives. *Am J Obstet Gynecol* 1974;119:406-10.

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## Guidelines and public consultations

In response to the *CMAJ* commentary by Chatterjee and colleagues,<sup>1</sup> we at BC Guidelines wish to inform the authors that we have used their suggested method of public consultation for our guidelines for the past 10 years.

BCGuidelines.ca is overseen by the Guidelines and Protocols Advisory Committee (GPAC), a joint committee of the BC Medical Association and the British Columbia Ministry of Health. New and revised guidelines are subject to an external peer review to ensure guidelines are clearly written, appropriate, practical, and free from serious oversights or errors.

Each guideline is written by a working group of general practitioners, relevant specialists, a pharmacist and a research officer. The working group reviews current evidence and drafts the guideline, which is reviewed internally by GPAC and then sent for external review. The external review consists of mailing the guideline and accompanying questionnaire to a random sample of general practitioners (between 400 and 800 individuals), relevant specialties (10%–20% sample per specialty) that include nurse practitioners, other allied health professionals and stakeholders. The stakeholders are key contacts in the areas of pharmacy, laboratory procedures, health authorities, medical services plan billing, public health and health professional colleges and associations.

The questionnaire consists of approximately 10 questions that address clarity, applicability, utilization and overall assessment. Space is given for open-ended comments. The feedback from the external review is discussed by the working group, and any necessary changes are made. Before a guideline

can be finalized by GPAC and the Medical Services Commission of British Columbia, the feedback received from the external review must be reconciled.

Further information about BC Guidelines can be found at [BCGuidelines.ca](http://BCGuidelines.ca) or [hlth.guidelines@gov.bc.ca](mailto:hlth.guidelines@gov.bc.ca).

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BC Medical Association, Guidelines and Protocols Advisory Committee CoChair (Dalal); and British Columbia Ministry of Health, Guidelines and Protocols Advisory Committee CoChair (Power).

### Reference

1. Chatterjee A, Bhattacharyya O, Persaud N. How can Canadian guideline recommendations be tested? *CMAJ* 2013;185:465-7.

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## Interpreting positive urine cultures

On behalf of emergency physicians at Hamilton Health Sciences, we are compelled to respond to an article<sup>1</sup> that appeared in the practice section of *CMAJ*. In a survey of our colleagues, 29 out of 30 respondents believed that the patient in the article by Vaisman and colleagues<sup>1</sup> had a urinary tract infection. Only 1 respondent thought that the positive culture represented asymptomatic bacteriuria.

Because of the high mortality rate due to bacterial infection among older adults, and because systemic inflammatory response syndrome and septic shock were the most immediate and life-threatening possible diagnoses, most physicians would have likely treated the patient with antibiotics upon presentation.

Of the studies cited in the *CMAJ* article,<sup>1</sup> one was a qualitative (i.e., tape-recorded interview) study of nurses and doctors describing their diagnostic and prescribing practices concerning bacteriuria within a nursing home setting,<sup>2</sup> another was a self-report study from 1987 of 72 elderly participants' (59 women and 13 men) symptoms and urine culture results, in which there was no control for cognitive ability to describe symptoms.<sup>3</sup>