tion for most Quebecers (by Internet only) and the short period allowed (consultations are now closed) excluded those who do not have a computer and limited the options for those who do. I believe that the only ethical way for the Quebec government to implement its recommendations would be a province-wide referendum specifically addressing its proposals for private health insurance for services currently covered by publicly funded health care. Such a referendum would permit citizens to decide on the sort of health care system they want and would be congruent with practices in other democracies, such as Switzerland, which holds referenda on important issues like this one.

Joseph Erban

Member

Clinical Ethics Committee

Sir Mortimer B. Davis — Jewish

General Hospital

Montréal, Que.

REFERENCES

1. Pindera L. Quebec's proposed wait time guarantees. *CMAJ* 2006;174(8):1075-6.
2. *Guaranteeing access: meeting the challenges of equity, efficiency and quality* [consultation document]. Québec: Direction des communications du ministère de la Santé et des Services Sociaux; 2006 Feb. p. 52. Available: <http://publications.msss.gouv.qc.ca/acrobat/f/documentation/2005/05-721-01A.pdf> (accessed 2006 May 26).
3. Romanow RR. *Building on values: the future of health care in Canada*. Saskatoon: Royal Commission on the Future of Health Care; 2002 Nov. p. 31. Available: www.hc-sc.gc.ca/english/pdf/romanow/pdfs/HCC_Final_Report.pdf (accessed 2006 May 26).

DOI:10.1503/cmaj.1060071

Hepatitis C: reviewing the options

Tom Wong and Samuel Lee¹ mention some extrahepatic manifestations of infection with hepatitis C virus (HCV), but they do not discuss the urticarias. Internists and primary care physicians need to be aware that several forms of urticaria can be associated with asymptomatic HCV infection.

The link between HCV and urticaria is controversial,² because various studies have failed to differentiate between acute urticaria, chronic urticaria and urticarial vasculitis, all of which have

been proposed as being associated with HCV infection. The estimated prevalence of urticaria varies from 1.8% to 24%, and one case-control study disputed the association altogether.² The association with other hepatitis viruses is more certain. For example, electron microscopy was used to identify hepatitis B surface antigen-antibody complexes in cryoprecipitates taken from patients during the acute urticarial episode.³

Immune-complex deposits of viral hepatitis can activate the complement system, which results in a serum-sickness-like syndrome, with arthritis, excruciating headache and urticaria (known as Caroli's triad).⁴ Urticaria resolves on treatment with interferon, and more benefit is seen when urticarial vasculitis is associated with mixed essential cryoglobulinemia.⁵

HCV testing should not be a routine screening test for all urticarias, but it is good clinical practice to consider viral marker studies in a patient with urticaria who presents with icterus or elevated transaminase levels (or both). The awareness that urticaria or urticarial vasculitis may be caused by hepatitis C is important, as early antiviral treatment can reduce significant morbidity and mortality.

Sujoy Khan

Specialist Registrar Immunology

PathLinks Immunology

Scunthorpe General Hospital

Scunthorpe, North Lincolnshire, UK

W.A.C. Sewell

PathLinks Immunology

Scunthorpe General Hospital

Scunthorpe, North Lincolnshire, UK

University of Lincoln

Brayford Pool, Lincoln, UK

REFERENCES

1. Wong T, Lee SS. Hepatitis C: a review for primary care physicians. *CMAJ* 2006;174(5):649-59.
2. Cribier B. Urticaria and hepatitis. *Clin Rev Allergy Immunol* 2006;30:25-30.
3. Dienstag JL, Rhodes AR, Bhan AK, et al. Urticaria associated with acute viral hepatitis type B: studies of pathogenesis. *Ann Intern Med* 1978;89:34-40.
4. Caroli J. Serum-sickness-like prodromata in viral hepatitis: Caroli's triad. *Lancet* 1972;1(7757):964-5.
5. Hamid S, Cruz PD Jr, Lee WM. Urticarial vasculitis caused by hepatitis C virus infection: response to interferon alfa therapy. *J Am Acad Dermatol* 1998;39(2 Pt 1):278-80.

DOI:10.1503/cmaj.1060100

As Tom Wong and Samuel Lee mention in their article about hepatitis C,¹ patients with genotype 2 or 3 "are expected to have a high likelihood of treatment success"; however, the conclusion that these patients "may not require a liver biopsy and do not require a baseline viral load measurement" seems premature.

First, several clinical trials^{2,3} have demonstrated a lower likelihood of sustained virological response in patients with genotype 2 or 3 who also have advanced fibrosis. Other researchers were unable to reproduce these findings, probably because such patients are often underrepresented in clinical trials.⁴ Additional studies are now showing that steatosis is another independent predictor of sustained virological response in these patients.^{4,5} Interestingly, findings in patients with genotype 3 indicate that only metabolic (but not viral) steatosis is associated with lower sustained virological response.⁶

Second, current evidence suggests that among patients with genotype 3, viral load is an important predictor of both sustained virological response^{3,4,7,8} and early virological response.³ Moreover, for patients with genotype 2 or 3 and early virological response at week 4, shorter courses of therapy (12-16 weeks) were as effective as the recommended course of 24 weeks.^{3,7,8} Whether patients with genotype 2 or 3 who have a high viral load and/or absence of early virological response (with or without advanced liver fibrosis) will benefit from longer treatment should be investigated in further clinical trials.

It therefore appears that both baseline histologic findings and viral load may be useful for tailoring treatment in certain subgroups of patients with genotype 2 or 3 in whom the standard duration of therapy might constitute overtreatment.

Michal R. Pijak

Consultant in Internal Medicine,

Rheumatology, Allergy and Clinical

Immunology

Department of Internal Medicine

University Hospital

Bratislava, Slovakia