

Update on CanVasc Initiatives and the Consolidated Place of Canada in the International Vasculitis Research Field

By Christian Pagnoux, MD, MSc, MPH

The objectives of the Canadian Vasculitis network (CanVasc), when it was founded in 2010, were to optimize the care of patients with vasculitis in Canada by identifying centres with expertise and interest in vasculitis; to develop recommendations, educational and awareness programs for health care providers; promote and develop studies on vasculitis; and increase Canadian participation and recognition in the international vasculitis world.

Nineteen centres across Canada are now affiliated with CanVasc, with the recent addition of the Victoria, BC centre (Dr. C. Baldwin). More collaborators from various specialties have joined the CanVasc centres, including Dr. J.W. Cohen-Tervaert, an internationally renowned rheumatologist and immunologist, who has conducted and participated in many seminal studies of vasculitis and moved a couple of years ago from The Netherlands to Edmonton.

Results of several cohort studies or series from a few CanVasc centres have been published and involved Canadian or international vasculitis fellows (*e.g.*, L. McGeoch, M. Soowamber, M. Rhéaume), rheumatology or internal medicine residents, or medical students (*e.g.*, B. Russell). Other study projects are ongoing, and ideas for new ones are welcome.

Collaborations with the Vasculitis Clinical Research Consortium (VCRC), led by Dr. P.A. Merkel in the United States, have grown further. Toronto (Dr. S. Carette) and Hamilton (Dr. N. Khalidi) were the first centres, in 2006, to participate in this huge U.S. National Institutes of Health-funded network. A few other CanVasc centres, including Montreal, Ottawa, London, Calgary and Vancouver recently joined for some specific sub-studies, and others will. Of note, a few CanVasc core members are now leading some VCRC sub-studies. Dr. N. Milman (Ottawa) leads the newly launched VCRC longitudinal cohort study for isolated aortitis. Dr. C. Pagnoux (Toronto) leads the ongoing



ARAMIS study, the second ever-conducted randomized trial for isolated skin vasculitis.

Many Canadian centres participated in the recently completed PEXIVAS study (assessing plasma exchange and steroid dosing in severe ANCA-associated vasculitis), led by Drs. M. Walsh, nephrologist and associated CanVasc core member in Hamilton, P.A. Merkel (VCRC) and D. Jayne (EUVAS). Several Canadian centres also took part in the pharma-sponsored studies on giant cell arteritis (GiACTA; study of tocilizumab) or EGPA (MIRRA; study of mepolizumab).

In parallel, CanVasc core members achieved important national, practice-oriented or educational projects. The first CanVasc recommendations, for the diagnosis and management of ANCA-associated vasculitis, were published in 2016, and the process of updating them has just begun, with Dr. A. Mendel, current vasculitis fellow in Toronto and future staff rheumatologist in Montreal. Several systematic reviews of various aspects of the management of Takayasu arteritis have been published by the groups of Dr. L. Barra (London, ON) and Dr. E. Yacyshyn (Edmonton), and others are ongoing, including on giant cell arteritis (Dr. P. Liang's group, Sherbrooke).

In total, 400 books of the first edition of CaVALI (Canadian Vasculitis Learning Initiative) were distributed, free-of-charge, across Canada, to CanVasc members, fellows and residents. This unique tool includes real-life case-scenarios, with practical questions and answers. A second edition, entirely updated, is in press; 800 books will be printed, for core members to distribute in their centres. The electronic version will be available in fall 2019 on the CanVasc website, where various teaching or conference presentations by core members are already available.

Hence, core members can be proud of what they have accomplished or participated in. Several new projects are ongoing, and collaborations will be expanding. There are

persistent challenges, some with no clear solution yet, such as assuring the funding of future CanVasc activities, or the need to develop more original, multicentre, institution-driven studies, especially when a nation-wide, centralized process for ethics approvals is still lacking. All hands on deck!

References:

1. Baldwin C, Carette S, Pagnoux C. Linking classification and therapeutic management of vasculitides. *Arthritis Res Ther* 2015; 17:138.
2. Barra L, Kanji T, Malette J, Pagnoux C, CanVasc. Imaging modalities for the diagnosis and disease activity assessment of Takayasu's arteritis: A systematic review and meta-analysis. *Autoimmun Rev* 2018; 17:175-87.
3. Barra L, Liang P, Benseler SM, et al. Variations in the clinical practice of physicians managing Takayasu arteritis: a nationwide survey. *Open Access Rheumatol* 2017; 9:91-9.
4. Barra L, Yang G, Pagnoux C, CanVasc. Non-glucocorticoid drugs for the treatment of Takayasu's arteritis: A systematic review and meta-analysis. *Autoimmun Rev* 2018; 17:683-93.
5. Barra L, Borchin RL, Burroughs C, et al. Impact of vasculitis on employment and income. *Clin Exp Rheumatol* 2018; 36 Suppl 111:58-64.
6. McGeoch L, Twilt M, Farnorca L, et al. CanVasc Recommendations for the Management of Antineutrophil Cytoplasm Antibody-associated Vasculitides. *J Rheumatol* 2016; 43:97-120.
7. McGeoch L, Carette S, Cuthbertson D, et al. Cardiac involvement in granulomatosis with polyangiitis. *J Rheumatol* 2015; 42:1209-12.
8. Osman M, Pagnoux C, Dryden DM, et al. The role of biological agents in the management of large vessel vasculitis (LVV): a systematic review and meta-analysis. *PLoS One* 2014; 9:e115026.
9. Pagnoux C, Nair P, Xi Y, et al. Serum cytokine and chemokine levels in patients with eosinophilic granulomatosis with polyangiitis, hypereosinophilic syndrome, or eosinophilic asthma. *Clin Exp Rheumatol* 2019.
10. Rheaume M, Rebello R, Pagnoux C, et al. High-resolution magnetic resonance imaging of scalp arteries for the diagnosis of giant cell arteritis: Results of a prospective cohort study. *Arthritis Rheumatol* 2017; 69:161-8.
11. Russell BA, Mohan S, Chahal R, Carette S, Pagnoux C, CanVasc. Prognostic significance of cavitory lung nodules in granulomatosis with polyangiitis – A clinical and imaging study of 225 patients. *Arthritis Care Res (Hoboken)* 2017.
12. Stone JH, Tuckwell K, Dimonaco S, et al. Trial of Tocilizumab in Giant-Cell Arteritis. *N Engl J Med* 2017; 377:317-28.
13. Soowamber M, Weizman AV, Pagnoux C. Gastrointestinal aspects of vasculitides. *Nat Rev Gastroenterol Hepatol* 2017; 14:185-94.
14. Walsh M, Merkel PA, Peh CA, et al. Plasma exchange and glucocorticoid dosing in the treatment of anti-neutrophil cytoplasm antibody associated vasculitis (PEXIVAS): protocol for a randomized controlled trial. *Trials* 2013; 14:73.
15. Wechsler ME, Akuthota P, Jayne D, et al. Mepolizumab or placebo for eosinophilic granulomatosis with polyangiitis. *N Engl J Med* 2017; 376:1921-32.

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