VF Canada day

Christian Pagnoux, MD MSc MPH
Toronto, ON

28 October 2017
Disclosures

• Consulting and speaker fees
  – Hoffmann-La Roche
  – BMS

• Advisory and study boards
  – Hoffmann-La Roche
  – ChemoCentryx
  – GSK
  – Sanofi

• Educational subventions (CanVasc)
  – Hoffmann-La Roche
  – Abbott Immunology
  – Pfizer-Amgen
  – Janssen-Cilag
  – Euroimmun
  – Terumo-BCT
  – BMS
Objectives

• Review the main and most recent activities of CanVasc

• Review the results of some recent local and international studies on vasculitides

• Understand how you did and/or can contribute
2012 Chapel hill Nomenclature

Immune Complex Small Vessel Vasculitis
- Cryoglobulinemic Vasculitis
- IgA Vasculitis (Henoch-Schönlein)
- Hypocomplementemic Urticarial Vasculitis (Anti-C1q Vasculitis)

Medium Vessel Vasculitis
- Polyarteritis Nodosa
- Kawasaki Disease

Anti-GBM Disease

ANCA-Associated Small Vessel Vasculitis
- Microscopic Polyangiitis
- Granulomatosis with Polyangiitis (Wegener’s)
- Eosinophilic Granulomatosis with Polyangiitis (Churg-Strauss)

Large Vessel Vasculitis
- Takayasu Arteritis
- Giant Cell Arteritis

VCRC
GEN.II.07
Consortium Summary Report (VCRC)
Accrual by Protocol: Number of Eligible Participants Overtime
Data Current as of May 28, 2017
Protocol: 5502 - VCRC Longitudinal Protocol for Giant Cell Arteritis

Month

Cleveland Clinic Foundation (VCRC)
Mayo Clinic (VCRC)
Mount Sinai Hospital, Toronto (VCRC)
University of Pittsburgh (VCRC)
University of Pennsylvania (VCRC)
Johns Hopkins University (VCRC)
Boston University School of Medicine (VCRC)
St. Joseph’s Healthcare Hamilton (VCRC)
University of Utah (VCRC)
GEN.II.07

Consortium Summary Report (VCRC)

Accrual by Protocol: Number of Eligible Participants Overtime

Data Current as of May 28, 2017

Protocol: 5506 - VCRC Longitudinal Protocol for Eosinophilic granulomatosis with polyangiitis (Churg-Strauss)
Protocol: 5505 - VCRC Longitudinal Protocol for Granulomatosis with Polyangiitis (Wegener's) and Microscopic Polyangiitis

Accrual by Protocol: Number of Eligible Participants Overtime

Data Current as of May 28, 2017
## DCVAS Study

### DCVAS top recruiting sites* end October 2016

* patients recruited > 24 months ago are not included if complete data has not been submitted

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Consortium Summary Report (VCRC)
Protocol Adherence: Percent of Expected Events Submitted By Institution and Quarter Due (All Protocols Combined)
Data Current as of May 28, 2017

Protocol=5599 - Diagnostic Questionnaire for VCRC Contact Registry Participants

![Graph showing protocol adherence](image)
The network
• Ottawa CRA 2/2017

• Vancouver CRA 2/2018

• Phone conference (as needed)
Objectives

• organize a dedicated health and research network across Canada
• Develop educational and awareness programs for health care providers
Recent Evidence in Vasculitls Science and Treatment

Management of AAV in the clinical setting
The CanVasc website

Explore CanVasc and its affiliated centers across Canada

CanVasc is the Canadian network for research on vasculitides. It was created in November 2010 by Drs. Pagnoux, Carrière and Khalidi. The first task was to identify referral medical centers and physicians across Canada with expertise in vasculitis and who were willing to be part of this new research group (core members). Among its several other aims, important ones are to help conduct studies on vasculitis, provide support and educational material on vasculitis for physicians and other health care professionals and, eventually, optimize the therapeutic management of patients with these rare diseases.

Click here for more information on CanVasc.
Click here for more information on CanVasc meetings.

CanVasc recommendations for the management of ANCA-associated vasculitides

One of the objectives of CanVasc is to harmonize and optimize the treatment of patients with vasculitides and, eventually, improve their outcomes, wherever they live in Canada. The development of recommendations will help achieve this goal. Starting in 2013, CanVasc core members had been working hard to develop this first Canadian recommendations for the management of ANCA-associated vasculitides. They have been published in November 2015 in the Journal of Rheumatology (link here), with an executive summary in the Canadian Journal of Kidney Health and Disease (link here).

The teaching CanVasc CAVALI book has been distributed!

CanVasc printed out in March 2017 its first educational book on vasculitides, based on practical clinical case-scenarios, the CAVALI book (CanVasc learning initiative). Batches of books, free for residents and physicians, have been sent to every local CanVasc core members. An updated version of the book will be printed out in March 2018.

You can download, by clicking here, the first 8 pages of the book.

Review studies on vasculitis actively recruiting in Canada

Several prospective studies on vasculitis are ongoing across the world, including in several Canadian centers. Have a brief overview of these latter ones, including ARAMIS, CULTIS, ADVOCATE, ABROGATE, DCVAS, BramWorks and TAPiR on the study website and determine whether your patients could participate in any of them.

Patients can also enroll themselves directly into the VCRS contact registry or the V-PPRN research network.
Several studies are ongoing and rolling already with the active participation of patients leaving in North America, including some studies led by CanVasc researchers! See the links to those registry and network and get more information on this very topic.

Webmaster: Dr. Christian Pagnoux
GIANT CELL ARTERITIS: ASSESSMENT OF NEW & EMERGING TREATMENT OPTIONS
Objectives

• organize a dedicated health and research network across Canada
• Develop educational and awareness programs for health care providers
• Canadian Recommendations for the diagnostic and therapeutic management
CanVasc Recommendations for the Management of Antineutrophil Cytoplasm Antibody-associated Vasculitides


ABSTRACT. Objective. The Canadian Vasculitis research network (CanVasc) is composed of physicians from different medical specialties and researchers with expertise in vasculitis. One of its aims is to develop recommendations for the diagnosis and management of antineutrophil cytoplasm antibody (ANCA)-associated vasculitides (AAV) in Canada.

Methods. Diagnostic and therapeutic questions were developed based on the results of a national needs assessment survey. A systematic review of existing non-Canadian recommendations and guidelines for the diagnosis and management of AAV and studies of AAV published after the 2009 European League Against Rheumatism/European Vasculitis Society recommendations (publication date: January 2009) until November 2014 was performed in the Medline database, Cochrane library, and main vasculitis conference proceedings. Quality of supporting evidence for each therapeutic recommendation was graded. The full working group as well as additional reviewers, including patients, reviewed the developed therapeutic recommendations and nontherapeutic statements using a modified 2-step Delphi technique and through discussion to reach consensus.

Results. Nineteen recommendations and 17 statements addressing general AAV diagnosis and management were developed, as well as appendices for practical use, for rheumatologists, nephrologists, respirologists, general internists, and all other healthcare professionals more occasionally involved in the management of patients with AAV in community and academic practice settings.

Conclusion. These recommendations were developed based on a synthesis of existing international guidelines, other published supporting evidence, and expert consensus considering the Canadian healthcare context, with the intention of promoting best practices and improving healthcare delivery for patients with AAV.
Variations in the clinical practice of physicians managing Takayasu arteritis: a nationwide survey

Lillian Barra,1 Patrick Liang,2 Susanne M Benseler,3 David A Cabral,4 Aurore Fifi-Mah,5 Yueyang Li,1 Nataliya Milman,6 Marinka Twilt,3 Elaine Yacyshyn,7 Christian Pagnoux8

1Division of Rheumatology, The University of Western Ontario, St Joseph’s Health Care, London, Ontario, 2Division of Rheumatology, Centre Hospitalier Universitaire

Objective: Takayasu arteritis (TAK) is a large vessel vasculitis that predominately affects young women and can cause severe ischemic complications. Given the rarity of TAK, the management of this condition is challenging. We aim to describe current rheumatologist practices for the management of TAK and identify discrepancies and gaps in knowledge.

Methods: An online survey (developed by the Canadian Vasculitis Network and approved by the Canadian Rheumatology Association) containing 48 questions with regard to the diagnosis, monitoring and treatment of TAK was distributed to 495 Canadian adult and pediatric rheumatologists by email.

Results: Sixty-six rheumatologists completed the survey (13% response rate): the majority (73%) were from academic centers and ≤25% reported managing more than ten patients in their career. For establishing the diagnosis of TAK, they relied on a combination of signs and symptoms of ischemia, elevations of inflammatory markers and vascular imaging (typically...
Objectives

• organize a dedicated health and research network across Canada
• Develop educational and awareness programs for health care providers
• Canadian Recommendations for the diagnostic and therapeutic management
• Stand as the Canadian advisory group to identify needs in vasculitis
REIMBURSEMENT CRITERIA

For the induction of remission of severely active Granulomatosis with Polyangiitis (GPA) OR microscopic polyangiitis (MPA) as combination treatment with glucocorticoids, in patients who meet all of the following criteria:

1. The patient must have severe active disease that is life- or organ-threatening. At least one supporting laboratory and/or imaging report must be provided. The organ(s) and how the organ(s) is(are) threatened must be specified.
2. There is a positive serum assays for either proteinase 3-ANCA (anti-neutrophil cytoplasmic autoantibodies) or myeloperoxidase-ANCA. A copy of the laboratory report must be provided.
3. Cyclophosphamide cannot be used for the patient for at least ONE of the following reasons:
   a) The patient has failed a minimum of six IV pulses of cyclophosphamide; OR
   b) The patient has failed three months of oral cyclophosphamide therapy; OR
   c) The patient has a severe intolerance or an allergy to cyclophosphamide; OR
   d) Cyclophosphamide is contraindicated; OR
   e) The patient has received a cumulative lifetime dose of at least 25 g of cyclophosphamide; OR
   f) The patient wishes to preserve ovarian/testicular function for fertility.

The initial treatment would be a once weekly infusion dosed at 375 mg/m² x 4 weeks.

The physician must confirm that the treatment would not be a maintenance infusion as maintenance infusions will not be funded. _____________________________

Renewals will be considered provided that, the patient meets the same criteria for initial approval and the request for retreatment is made no less than 6 months after the last does of the patient’s last treatment cycle with Rituxan.
Induction

- MP pulses d1–3

Maintenance

- CS 10 mg/d 5 mo
- ± PE
- Rituximab 500 mg d1,14, 6, 12, 18 mo
- Azathioprine 2 mg/kg/d

ENDPOINT

newly diagnosed relapsing (up to 1/3)

- 18-75 yr.
- GPA, MPA, RLD
- ANCA+ and/or biopsy

- 6–9 pulses

- CYC

18 mo

22

+10 mo

28
115 patients
(65 M/50 F; 55 ± 13 yr; 87 GPA, 23 MPA, 5 RLD; 92 new / 23 relapsing)

58 AZA
17 (29%) relapses

57 RTX
3 (5%) relapses

Survival without a major relapse

28

72% RTX
49% AZA

HR=2.51 [1.35-4.69]
Induction

MP pulses D1–3

GC

10 mg/d

6 mo

± Plasmapheresis

RTX

(375 mg x4)

18 mo

Maintenance

Relapsers

ANCA+

Rituximab 1000 mg

m4, 8, 12, 16, 20

Azathioprine 2 mg/kg/d (MMF)

3–6 mo

18 mo

24

27

36–48

ENDPOINT
Toronto,
March 12th, 2017

For Exceptional Access Program & Ontario Public Drug Programs, MOHLTC

This letter is to request consideration on behalf of the Canadian vasculitis research group (CanVasc) for the approval and coverage of rituximab for maintenance in patients with granulomatosis with polyangiitis or microscopic polyangiitis, who have achieved remission following induction with a combination of glucocorticoids and cyclophosphamide or rituximab.

CanVasc, created in 2011, includes >20 physicians from various medical specialties across Canada, with expertise and interest in vasculitis, and many more collaborators (updated list on the CanVasc website, http://www.canvasc.ca). CanVasc ultimately aims to optimize the management of vasculitis in Canada through the development of (or assistance with the development of) guidelines, educational and awareness programs for health care providers and studies of vasculitides. The first CanVasc recommendations, for the diagnosis and management of ANCA-associated vasculitis, have been published. Work is currently under way to develop similar recommendations for Takayasu arteritis and for giant cell arteritis (focusing on some specific aspects of its management). CanVasc has also been developing tools to help disseminate these recommendations and educational materials to train physicians managing vasculitis. Cohort studies have also been initiated, using a nationwide vasculitis database, which may help identifying differences in care and outcomes across provinces and analyzing treatment impact.

In July 2010, the published results of both the RAVE and RITUXVAS studies showed that rituximab was non-inferior to cyclophosphamide to induce remission in patients with severe granulomatosis with polyangiitis or microscopic polyangiitis, in combination with glucocorticoids. The US Food and Drug Administration thus approved in April 2011 the use of rituximab as an alternative to cyclophosphamide for the induction of remission in patients with severe granulomatosis with polyangiitis or microscopic polyangiitis, as did, a few months later, Health Canada. For induction, the approved dosage is 4 weekly infusions of 375mg/m² (as used in the RAVE study). A different regimen of 1g at days 1 and 15 is as effective and safe. In practice, the use of cyclophosphamide in general has been declining over the past decade due to the higher risks of malignancies and infertility associated with its use.

However, the subsequent relapse rates in the RAVE trial was still high, at 32% at 18 months, without any systematic maintenance (after rituximab-based induction) or with azathioprine (after cyclophosphamide-based induction). The relapse rate further increases thereafter, up to 50% at 5 years in the absence of another maintenance strategy. Two retrospective studies reported conflicting results on the use of azathioprine following rituximab-based induction. In one, azathioprine did not decrease the rate of relapse. In the other one, it did, but with a much higher relapse rate in the patients induced with rituximab and who

We think, as the Canadian referral group for vasculitis and in line with other European groups, that it is time for Canada to reconsider approval and coverage for rituximab for patients with granulomatosis with polyangiitis or microscopic polyangiitis who had achieved remission after a treatment with glucocorticoids and cyclophosphamide or rituximab. There is no doubt in our mind that the approval of rituximab for maintenance is urgently needed and evidence-based justified, and should no longer be delayed further in Canada. Patient support groups, including the Vasculitis Foundation Canada, have also been supportive and strong proponents of our request.

Furthermore, we feel compelled to note that the use of rituximab for maintenance is already in practice, and covered, for patients with rheumatoid arthritis, whose manifestations are only rarely life threatening (when complicated by vasculitis or interstitial lung disease).

We are willing to help define the criteria for its approval for maintenance, which at this time would be "rituximab for maintenance in patients with granulomatosis with polyangiitis or microscopic polyangiitis who had achieved remission, after a treatment with glucocorticoids and rituximab or cyclophosphamide, given at the dose of 500 or 1000 mg every 6 months for 18 months (5 infusions total)".

Evidence on the optimal treatment duration is not yet available, and longer treatment could be indicated in some patients. Until more evidence become available, it is reasonable to use the dose regimen of the MAINRTSNIH study or the UK-European cohort studies and consider the initial approval for 18 months.

Looking forward to your favourable response,

Sincerely,

Christian Pagnozzi, MD, MSc, MPH
Director of CanVasc
Vasculitis Clinic, Division of Rheumatology,
Mount Sinai Hospital
Toronto, Ontario
Correspondence:
Email: christian.pagnozzi@sisainhealthsystem.ca
Tel: 416 586 4800 Ext. 5519

Lillian Barra, MD, MPH, FRCPC
Secretary of CanVasc
Division of Rheumatology, St. Joseph’s Health Care,
University of Western Ontario
London, Ontario

Nader Khoury, MD, FRCP(C)
Vice-Director of CanVasc
Division of Rheumatology, McMaster University
Hamilton, Ontario

John Stewart
President
Vasculitis Foundation Canada
Relapse rate of GCA

Spanish cohort
106 TAB+ patients
F/up 7.6 +/- 3.3 years

→64% relapsed (at median 51 weeks)
→rarely with vision loss

→weak predictors: scalp tenderness, PMR symptoms, high SIR (haptoglobin)

→40% to 85% in other studies

Alba et al, Medicine 2014;93:194-201
**GiACTA Study Design**

**Part 1**
52 weeks double-blind*

- Baseline
  - SC placebo + 26-wk prednisone taper (n = 50)
  - SC placebo + 52-wk prednisone taper (n = 50)
  - TCZ 162 mg QW + 26-wk prednisone taper (n = 100)
  - TCZ 162 mg Q2W + 26-wk prednisone taper (n = 50)

**Week 52**
- Patients in remission at Wk 52: Long-term FU off study drug
- Patients not in remission at Wk 52: Open-label TCZ 162 mg QW

**Part 2**
104 weeks long-term follow-up

**Week 156**
- 8 weeks safety FU

**Primary Endpoint**
Proportion of patients in sustained remission from Week 12 to Week 52 and adherence to the protocol-defined prednisone taper regimen

* Open-label prednisone 20-60 mg/day at baseline. Prednisone doses < 20 mg/day during the taper were blinded.
Primary Endpoint Met: Sustained Remission

vs Placebo + 26-Week Steroid Taper

Patients in sustained remission from Week 12 to Week 52

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<th>Treatment</th>
<th>Percent Patients</th>
<th>P Value</th>
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<tr>
<td>TCZ QW</td>
<td>56.0%</td>
<td>P &lt; 0.0001</td>
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<tr>
<td>TCZ Q2W</td>
<td>53.1%</td>
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Unadjusted difference in proportion of responders (%)

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<th>Treatment</th>
<th>Difference</th>
<th>99.5% CI</th>
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<td>PBO + 26</td>
<td>42</td>
<td>(18.0, 66.0)</td>
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<tr>
<td>TCZ QW</td>
<td>39.1</td>
<td>(12.5, 65.7)</td>
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FDA approves first drug to specifically treat giant cell arteritis

For Immediate Release

May 22, 2017

The U.S. Food and Drug Administration today expanded the approved use of subcutaneous Actemra (tocilizumab) to treat adults with giant cell arteritis. This new indication provides the first FDA-approved therapy, specific to this type of vasculitis.

“We expedited the development and review of this application because this drug fulfills a critical need for patients with this serious disease who had limited treatment options,” said Badru Chowdhury, M.D., Ph.D., director of the Division of Pulmonary, Allergy, and Rheumatology Products in the FDA’s Center for Drug Evaluation and Research.

Giant cell arteritis is a form of vasculitis, a group of disorders that results in inflammation of blood vessels. This inflammation causes the arteries to narrow or become irregular, impeding adequate blood flow. In giant cell arteritis, the vessels most involved are those of the head, especially the temporal arteries (located on each side of the head). For this reason, the disorder is sometimes called temporal...
Remission in 53% vs 19% only with placebo
Objectives

• organize a dedicated health and research network across Canada
• Develop educational and awareness programs for health care providers
• Canadian Recommendations for the diagnostic and therapeutic management
• Stand as the Canadian advisory group to identify needs in vasculitis

• Initiate, conduct, and promote STUDIES on vasculitis across Canada using an existing, efficient and rapidly mobilisable network
A single centre cohort description of 225 Granulomatosis with Polyangiitis patients

Bailey Russell, MD candidate, Rach Chahal, MD candidate, Simon Carette, MD, and Christian Pagnoux, MD, MSc, MPH for the Canadian Vasculitis Network (CanVasc)

INTRODUCTION
Granulomatosis with polyangiitis (GPA) has been described in several cohorts of adult patients worldwide,

OBJECTIVE

Our objective was to describe clinical characteristics, treatments, and outcomes of the 225 adult patients with GPA followed in the vasculitis clinic in Toronto, with comparison to previous studies.

METHODS
The following data were extracted from patient charts, entered into the CanVasc database, and analyzed:

- demographics
- comorbidities
- clinical manifestations of vasculitis
- biologic results
- initial induction and maintenance treatments
- outcomes (global relapse and survival rates, and according to year of diagnosis [before vs. ≥2005])

RESULTS

Table 1. Characteristics of patients diagnosed between 1970 and 2016

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<th>Characteristic at diagnosis</th>
<th>Toronto cohort (n=225)</th>
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<td>Mean length of follow-up ± SD months</td>
<td>106 ± 92.6</td>
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<td>Age at diagnosis ± SD</td>
<td>42 ± 18.7</td>
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<tr>
<td>BVAS v3, mean ± SD</td>
<td>15.2 ± 7.4</td>
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<td>Male/ female (%)</td>
<td>41/59</td>
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<tr>
<td>cANCA/ PR3 (%)</td>
<td>81.6/ 76.7</td>
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<tr>
<td>pANCA/ MPO (%)</td>
<td>8.6/ 6.5</td>
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Figure 1. Major organ systems affected at time of GPA diagnosis.

- ENT: ear, nose, throat
- MSK: musculoskeletal
- Ns: nervous system
- CVS: cardiovascular system
- G: gastrointestinal

Figure 2. Treatments for induction (A) and for maintenance (B).

Cyc: cyclophosphamide; MTX: methotrexate; MP: methylprednisolone pulses; P: prednisone; AZA: azathioprine

Figure 3. Kaplan Meier relapse-free survival curves, according to the year of diagnosis (p<0.001)

CONCLUSION

- The characteristics and outcomes of this Canadian cohort of patients with GPA are similar to other non-Canadian cohorts.
- The higher relapse rate of patients diagnosed ≥2005 may be explained by referral center bias or treatment changes over time, and/or changing disease patterns.
- Larger Canadian multicentric studies are needed, which may provide additional information and set the ground for Canadian prospective studies.

Need to add missing here (text only) on the comparison with other non-canadian cohorts (using the index abstract I sent you)


Acknowledgement:
Long-term Damage in the 225 Patients with Granulomatosis with Polyangiitis from the Toronto – CanVasc Cohort

Rach Chahal, MD candidate, Bailey Russell, MD candidate, Simon Carette, MD, and Christian Pagnoux, MD, MSc, MPH, for the Canadian Vasculitis Network (CanVasc)

INTRODUCTION & OBJECTIVE

Damage due to granulomatosis with polyangiitis (GPA) and its treatments is common, but has yet to be evaluated in a Canadian cohort of GPA patients.

Our objective was to assess the amount and type of damage most commonly observed in 225 adult patients with GPA followed in the vasculitis clinic in Toronto.

METHODS

The following data were extracted from patient charts, entered into the CanVasc database, and analyzed:

- demographics
- duration of follow-up
- use of cyclophosphamide (CYC) at any time during the course of the disease
- outcomes (relapses [none, 1 or ≥2], deaths)
- all items of the Vascular Damage Index (VDI)
- and the final VDI score at last follow-up visit.

VDI is a validated, cumulative score for damage in patients with vasculitis, and includes 64 items, grouped by organ or system and each scoring 1 point (range, 0-64).1

225 patients with GPA diagnosed between 1970 and 2016 have been followed for an average of 100.0 ± 135.5 months post-diagnosis.

Mean age at diagnosis was 42.7 (± 18.7) years.

Female: male sex ratio was 1.45.

CYC was used at some point during the course of the disease in 171 (76%) patients.

A total, 47 patients (20.9%) experienced one relapse, 98 (43.5%) had ≥2 relapses; 6 (2.7%) patients died.

Figure 1 shows the proportions of patients with different VDI scores at last follow-up.

Figure 2 shows the most common damage items recorded at last follow-up.

RESULTS

In univariate and multivariate Poisson regression analysis, a greater number of relapses was significantly associated with a higher VDI at last follow-up, with an expected increase of 23% in VDI for every additional relapse (p<0.01).

CONCLUSION

- More than % of patients with GPA suffer damage, mainly ENT but also neurological and/or renal.

- Strategies to limit damage are important aspects of the management of these patients, and include the prevention of relapse.

Reference


Ottawa, February 2017
Predictors of relapse in 225 patients with granulomatosis with polyangiitis

Bailey Russell
University of Toronto, Mount Sinai Hospital
on behalf of Rach Chahal, Dr. Simon Carette,
and Dr. Christian Pagnoux for the Canadian Vasculitis Network (CanVasc)
Prognostic significance of cavitary lung nodules in granulomatosis with polyangiitis - A clinical and imaging study of 225 patients

Bailey A. Russell, Sindu Mohan, Rachandeep Chahal, Simon Carette, Christian Pagnoux

The Canadian Vasculitis Network (CanVasc)

Accepted manuscript online: 9 October 2017

DOI: 10.1002/acr.23443

Abstract

Background

Granulomatosis with polyangiitis (GPA) is a systemic necrotizing vasculitis with pulmonary nodules as a common manifestation. Our study examined whether pulmonary nodules, and nodule type (solid versus cavitary), are associated with different disease manifestations and outcomes.

Methods

Demographic, clinical, biological, radiological data at diagnosis, during follow-up, and treatments of GPA patients followed at the Mount Sinai Hospital (Canada) vasculitis clinic were analyzed. Patients were separated by the absence of lung nodules, presence of solid nodules only, and presence of cavitary nodules (+/- solid nodules). Studied outcomes included follow-up lung imaging, relapses, and deaths.
Description of a Canadian center’s cohort of 110 patients with eosinophilic granulomatosis with polyangiitis

Natalie Pulenza, MD(C), Simon Carette, MD, MPhil, FRCP(C) and Christian Pagnoux, MD, MSc, MPH, for the Canadian Vasculitis Network (CanVasc)

Objective: Eosinophilic Granulomatosis with Polyangiitis (EGPA) is a rare vasculitis, with only a few published adult cohorts, none from Canada.

Methods: Data from patients with EGPA followed in the Toronto-Mount Sinai Hospital’s vasculitis clinic were extracted from the chart, with their consent, and entered into the database developed by the Can clinical manifestation.

Conventional immunosuppressants for the treatment of patients with refractory or relapsing eosinophilic granulomatosis with polyangiitis

Natalie Pulenza, MD(C), Simon Carette, MD, MPhil, FRCP(C) and Christian Pagnoux, MD, MSc, MPH, for the Canadian Vasculitis Network (CanVasc)

Objective: Few series or placebo-controlled trials suggested that mepolizumab or rituximab were effective for patients with relapsing or refractory eosinophilic granulomatosis with polyangiitis (EGPA). Surprisingly, comparable data on conventional non-biologic immunosuppressants, which have been prescribed for a much longer, are lacking.

Methods: Data from EGPA patients followed in the Mount Sinai Hospital’s vasculitis clinic (Toronto), entered into the Canadian vasculitis research network (CanVasc) database, were
Impact of Diabetes, ACE-I or ARB Use, and Statin Use on Presentation and Outcomes in Patients with Giant Cell Arteritis

Retrospective chart review of 2 large North American centers

JOCELYN MA, MD, NADER A. KHALIDI, MD, OLA WIERZBICKI, MD, ABDALLAH AL QETHAMI, MD, SIMON CARETTE, MD, CHRISTIAN PAGNOUX, MD, MSC, MPH
A case series of surgically diagnosed idiopathic aortitis in a Canadian centre: a retrospective study

Diane L. Murzin MD, Eric C. Belanger MD, John P. Veinot MD, Nataliya Milman MD; for the Canadian Vasculitis Network (CanVasc)

Abstract

Background: Idiopathic aortitis became recognized relatively recently, and the body of knowledge concerning this condition is scarce. We aimed to determine the frequency of idiopathic aortitis in aortic specimens, the clinical, laboratory and radiologic characteristics at diagnosis and during follow-up, and the approach to investigation, treatment and monitoring taken by the treating physicians.

Methods: We identified cases of aortitis diagnosed on pathological specimens of the aorta between Jan. 1, 2003, and July 31, 2013, at The Ottawa Hospital by reviewing the hospital’s pathology database. Charts of identified patients were reviewed, and data on patient demographic characteristics, clinical features, laboratory and imaging tests, treatment and outcomes were analyzed.

Results: A total of 684 aortic specimens were analyzed during the study period; 47 cases of aortitis were identified, 32 of which were idiopathic. Twenty-one patients (66%) had complete imaging of branch vessels at baseline, 16 (76%) of whom had additional aortic or branch vessel lesions. Twelve patients (38%) received corticosteroids postoperatively. Over a mean follow-up period of 47.5 months, among the 12 patients (38%) who had complete imaging of branch vessels at least once, new aortic or branch lesions were diagnosed in 5 (42%); 3/32 patients (9%) required additional vascular surgery; and a new systemic condition was diagnosed in 2/32 (6%).

Interpretation: Idiopathic aortitis is commonly discovered incidentally on examination of the pathological specimen following ascending aortic aneurysm repair. No guidelines exist for the investigation, treatment and follow-up of this condition, resulting in great variability of practice. Good-quality prospective studies are needed to address the many unanswered clinical questions regarding idiopathic aortitis and to allow formulation of more definitive recommendations.
• Cohorts $\rightarrow$ + aortitis + histology-tissue banking

• One-time DNA $\rightarrow$ Dr. Siminovitch (DNA + cytoflux)

• Trials: RITAZAREM, TAPIR, ABROGATE, ARAMIS, CUTIS, LoDoNaVasc (and…PEXIVAS)
Pharma-driven studies

- ADVOCATE
V-PPRN Research Studies

The goal of the V-PPRN research program is to conduct high-quality studies that will improve the care and the health of patients with vasculitis by exploring research questions and advancing medical knowledge about vasculitis.

The V-PPRN is currently conducting the following studies in partnership with the Vasculitis Clinical Research Consortium. These studies seek to address research questions that are important to both patients and researchers.

VascWork Study (This Study Is No Longer Enrolling Patients)

Although much progress has been made towards finding better medical therapies to treat vasculitis, patients with vasculitis often must manage substantial disease and treatment burdens. Patients with systemic vasculitis may have high rates of work disability and significant loss of personal income from employment. This study will ask questions about:

- Employment status (Do patients have to take a prolonged sick leave?)
- Work productivity (How many patients have to adjust their work because of the physical demands of the job?)
- Income (How many patients have a loss of income following the diagnosis of their disease?)

Learn more about this study >

ANCA Vasculitis Questionnaire (AAV-PRO®) (This Study Is No Longer Enrolling Patients)

We are developing and validating a questionnaire to assess quality of life in patients with ANCA-associated vasculitis (AAV). Patients with AAV have inflammation in the small blood vessels leading to involvement of a range of organs, for example kidneys, lungs and skin. Patients can suffer from ongoing disease activity or treatment side effects.

Quality of life can be measured by patient reported outcome measures (PROMs). This project is to develop a disease specific PROM for patients with AAV.

Learn more about this study >

Vasculitis Pregnancy Registry (V-PREG)

The purpose of this study is to learn about the experience of women with vasculitis who become pregnant. In particular, the study will consist of several online surveys to assess:

a) each woman’s vasculitis severity and pregnancy-related experiences, and
b) pregnancy outcomes.

Learn more about this study >
Impact of Vasculitis on Employment and Income

an Online Survey of Participants in the RDCRN-VCRC Patient Contact Registry

Lillian Barra, MD, MSc, Renée Borchin, Cristina Burroughs, Simon Carette, MD, MPhil, George Casey, MBA, Carol A. McAlear, MA, Antoine Sreih, MD, Kalen Young, MA, Peter A. Merkel, MD, MPH, Christian Pagnoux, MD, MSc, MPH, for Vasculitis Clinical Research Consortium
Results

• 421 respondents
12 June 2015 → 21 Dec 2015
Demographics

- 421 respondents
- 379 (90%) Caucasian-whites
- 128 (30%) men
- Mean age at diagnosis 53 ± 13 years [18-86]
- 354 (84%) living in the US
- 286 (69%) single/divorced/widowed
Diseases

Ever received GC for ≥ 6months: 392 / 421 (4 NR)
Status at diagnosis

- 113 (27%) reported another condition impacting work ability (CHF, OP, migraine, etc.)
- 315 (76%) paid job / employed
- 25 (6%) retired
- 9 (2%) on disability
- 33 (8%) students
- 17 (4%) unemployed

Follow-up: 8 ± 6.4 years [1-36]
Impact on work status

<table>
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<th>Follow-up</th>
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<td>29</td>
</tr>
<tr>
<td>Paid job</td>
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Impact on work status

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</tr>
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<td>Paid job</td>
<td>315</td>
<td>202</td>
</tr>
</tbody>
</table>

- **2%** on disability at Diagnosis
- **6%** Retired at Diagnosis
- **76%** Paid job at Diagnosis
- **19%** on disability at Follow-up
- **21%** Retired at Follow-up
- **49%** Paid job at Follow-up
Impact on work status

111 (26.4%) stopped working or retired earlier

After adjustment for (sex and) age:
• Less likely to have health insurance
  (OR 0.36; CI 95% 0.15-0.9)
• Less likely to have education beyond high school
  (OR 0.51; CI 95% 0.26-0.99)
• Less likely to have supportive work environment
  (OR 0.23; CI 95% 0.12-0.42)
• 4 clinical items: dyspnea (2.44), neuropathy (2.42), cognitive impairment (2.17), heart disease (2.60)
Impact on income

Decrease in income before → after

No answer 221
Not at all 124
A little 32
Moderate amount 22
A lot 22

76 (38%) reported a loss of income

by a median of 45% [2-95]
(n=66)
Severe Intracranial Involvement in Giant Cell Arteritis

5 Cases and Literature Review

Perinuclear antineutrophil cytoplasmic antibodies (pANCA)

CanVAS Recommendations for the Management of Vasculitis

Antineutrophil Cytoplasm Antibody-associated Vasculitides

CanVAS. Recommendations for the Management of Vasculitis: A systematic review and network meta-analysis

Vasculitis and the Lung

Chapter 13

Linking classification and therapeutic management of vasculitides

READERSHIP REVIEW

Open Access

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Compatibility of patients with ANCA-associated vasculitis with biologic remission maintenance therapy in adult patients with biologic remission maintenance therapy in adult patients with


Chapter 12

Ear, nose and throat involvement

Granulomatosis with polyangiitis (Wegener's granulomatosis, microscopic polyangiitis, Churg-Strauss syndrome, or eosinophilic granulomatosis with polyangiitis)
What’s next

• Continue the work!
• Continue to work!
• Continue working!

• Participate as you can!
• You can participate!
• Participate, you can!

• Improve the outcomes and… “Dream big”!