Vogt-Koyanagi-Harada Syndrome in a Canadian First Nations Population

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INTRODUCTION

Vogt-Koyanagi-Harada (VKH) Syndrome accounts for as many as 56% of diagnoses in Canadian FN.[1]

Important differences in FN uveitis:[1]

Earlier Onset	avg. 30 vs. 40 yrs
Female	84% vs. 68%[2]
Granulomatous	53% vs. 11%
Bilateral	86% vs. 51%
Panuveitis	67% vs. 16%
More severe despite earlier presentation, consistent follow-up	

Paucity of literature surrounding uveitis presentations in FN groups.

OBJECTIVES

To summarize demographics, ocular and systemic disease characteristics, treatment and outcomes of VKH in a Canadian FN population.

METHODS

- Retrospective case series of 27 FN patients (54 eyes) with VKH uveitis from Manitoba and Ontario.
- REB Approval: University of Manitoba, Assembly of Chiefs.

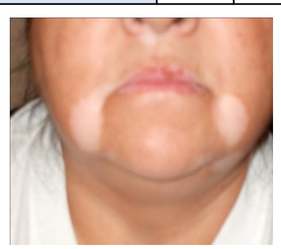
RESULTS

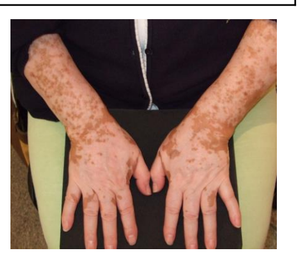
Patient Characteristics (n=27):

Age at Presentation	31.6 ± 14.1 (avg.)
Age of VKH Onset	30.9 ± 13.8 (avg.)
Sex	96.3% female
Urban vs. Rural	68% Rural
Chronicity	Acute (<3m): 52% Chronic (≥3): 48%
Follow-Up Duration	Median 3.1 yrs (IQR 7.3)
Bilateral Presentation	100%
Granulomatous Uveitis	78%

Systemic Characteristics:

Systemic Associations		
Dermatologic	70%	Alopecia, vitiligo, poliosis
Neurologic	63%	Headache, dizziness, meningismus, dysarthria
Auditory	48%	Dysacusis, hearing loss, tinnitus
Unique Associations	11%	Syncope, foot drop, arm and face paresthesias, stroke, diplopia, ataxia
Other Medical Characteristics		
Family History	25%	VKH, uveitis, vitiligo, alopecia, poliosis, autoimmune conditions
Comorbid TB	26%	Required treatment for comorbid TB while on immunosuppression

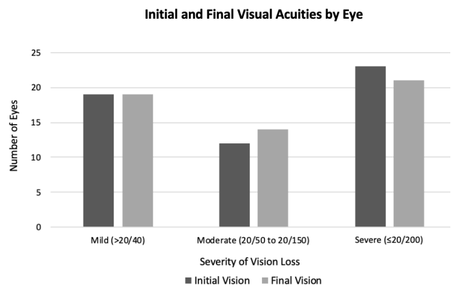




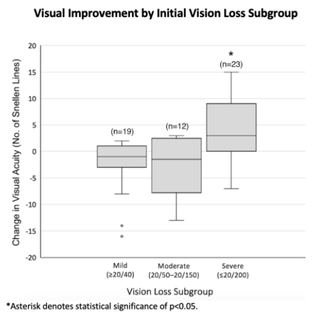
Ocular Disease Characteristics:

VKH Diagnosis:

- Complete: 9 (33%)
- Incomplete: 8 (30%)
- Probable: 10 (37%)



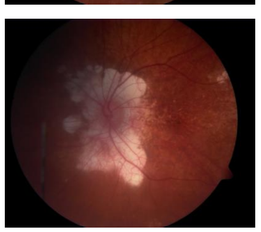
No correlations between prior duration of disease and initial or final visual outcome (R^2=0.004, 0.004)



- Average change: 0.1 ± 6.3 lines
- Eyes presenting with severe visual loss tended to recoup vision (mean 3.8 lines)
  - Reversible acute inflammation
  - Treatable complications
- Eyes with mild and moderate vision loss tended to lose vision (means -2.6, -2.8 lines)

Treatment:

Steroids	
Topical	27 (100%)
Oral	24 (89%)
Injected	11 (41%)
Intravenous	1 (4%)
Immunomodulatory Therapy (IMT)	
1 agent	8 (30%)
2 agents	2 (%7)
Glaucoma Drops	18 (67%)



CONCLUSIONS

- FN develop uveitis earlier (avg. age 31), strong female predilection.
- Final VAs were frequently poor (≤20/200 in 21 eyes, 39%). Global average is <30% for this subgroup.[3]
- Few patients had good final VAs (≥20/40 in 19 eyes, 35%). Global average is >50% for this subgroup.[3]
- Rates of IMT use fell well short of accepted guidelines.[4]
- Unique neurologic associations thought to represent inflammation of melanocyte-rich meninges over brainstem and cerebellum.[5]
- Cultural/geographic factors and comorbidities (incl. TB, diabetes) present unique challenges.

REFERENCES

1. Roy M. Analysis of uveitis in a Canadian Aboriginal population. Can J Ophthalmol. 2014;49(2):128–134.
2. Ehmann D, Tennant MTS, Somani R, Rudnisky CJ. Vogt-Koyanagi -Harada disease in First Nations and Métis of Northern Alberta. Can J Ophthalmol. 2013;48(3):146–152.
3. Abu El-Asrar AM, Al Tamimi M, Hemachandran S et al. Prognostic factors for clinical outcomes in patients with Vogt-Koyanagi-Harada disease treated with high-dose corticosteroids. *Acta Ophthalmol*. 2013;91:e486–e493.
4. Paredes I, Ahmed M, Foster CS. Immunomodulatory therapy for Vogt-Koyanagi-Harada patients as first-line therapy. Ocul Immunol Inflamm. 2006;14:87–90.
5. Sheriff F, Narayanan NS, Huttner AJ, Baehring JM. Vogt-Koyanagi -Harada Syndrome: a novel case and brief review of focal neurologic presentations. *Neurol Neuroimmunol Neuroinflamm*. 2014;1:1–3.