

Title: Icatibant in the Winnipeg Regional Health Authority



PRESENTER:
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BACKGROUND: Icatibant is indicated to treat Hereditary Angioedema types I and II. It is also used off-label to treat:

1. Hereditary Angioedema with normal C1-INH (HAE-nC1INH), and
 2. ACE-Inhibitor-Induced Angioedema (ACEI-AE)
- The Winnipeg Regional Health Authority became the first Canadian jurisdiction to add icatibant to its formulary in 2015. We describe the timeline to icatibant treatment, its effectiveness and the presence of confounding factors.

METHODS

1. Retrospective chart review identified 23 emergency department angioedema attacks treated with icatibant.
2. Survival analysis was performed on the time from emergency department presentation to:
 - a. Non-icatibant treatment
 - b. Allergist consult
 - c. Icatibant dispensation
 - d. Icatibant administration
 - e. Onset of Symptom Relief (TOSR)
 - f. Discharge or attack Resolution (TR)
3. Data was compared with reference data from a reference clinical randomized controlled trial or between subgroups of the study population, stratified by potential risk-factors.

RESULTS

100% of our HAE subgroup had HAE-nC1INH (n=10): the median TOSR and TR were similar to reference HAE type I/II clinical trial data^a (1.13 vs 0.8 hours, p = 0.34; 3.50 vs 8.0 hours, p=0.11).

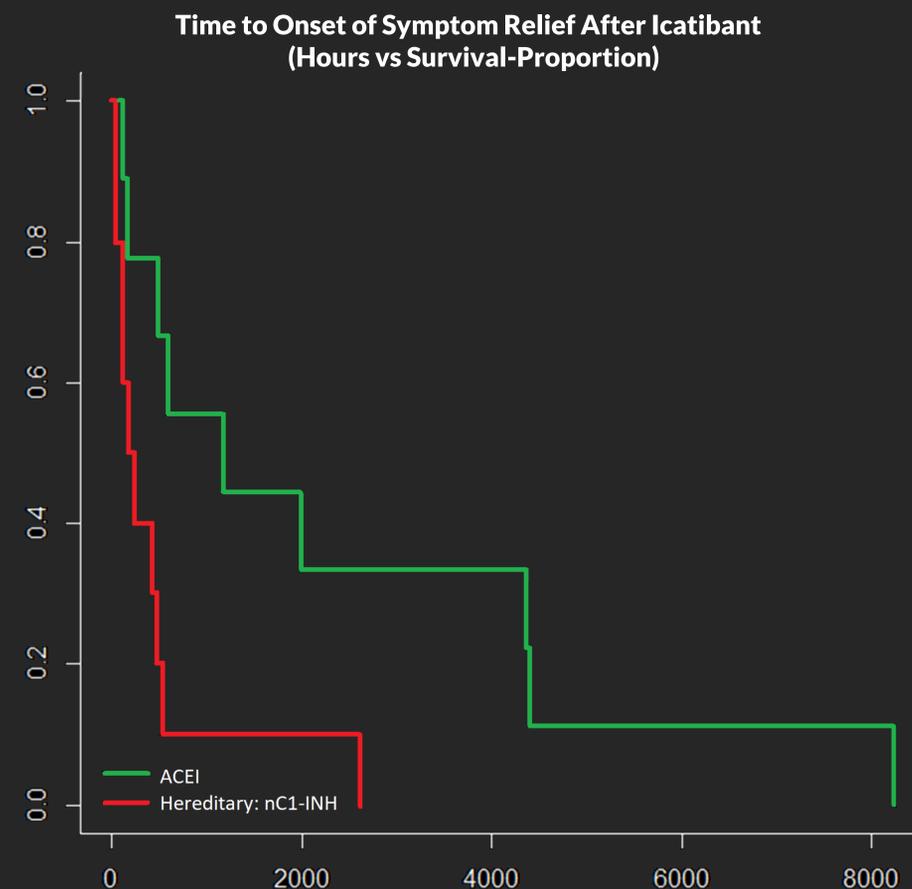
Icatibant-treated ACEI-AE (n=12) had a greater median TOSR than reference HAE type I/II data^a (4.86 vs 0.8 hours, p=0.01) and had a greater TR compared to our HAE-nC1INH subgroup (19.5 vs 3.5 hours, p=0.02). In support of this, the median ACEI-AE TR was not different from natural history^a (19.53 vs 4.0 hours, p=0.18).

Conventional trials of non-icatibant treatment significantly delays time to treatment (7.78 vs 2.06 hours, p=0.03).

CONCLUSION

Icatibant may be an effective treatment for HAE-nC1INH but not for ACEI-AE. Trialing conventional treatment delays icatibant treatment.

Icatibant treats hereditary angioedema with normal C1-INH but not angioedema caused by ACE-inhibitors

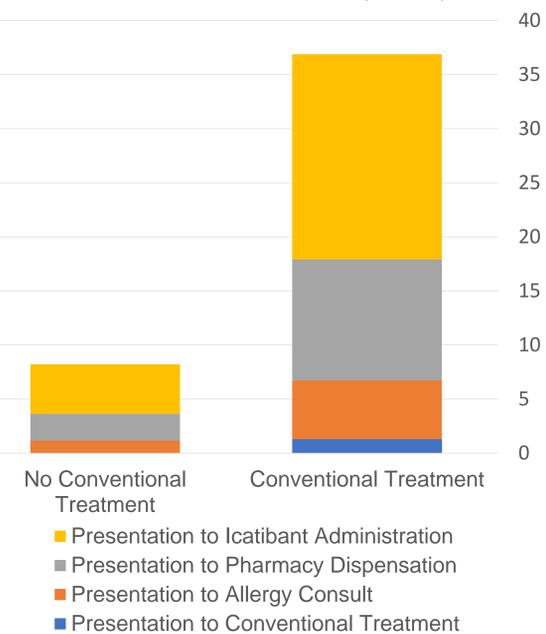


Supplemental

Category	Strata	Time to onset of symptom relief (median, hours)	p-value (*<0.05)	Time to overall clinical outcome (median, hours)	p-value (*<0.05)
History	HAE	1.13	0.05	3.50	0.02*
	ACEI-induced	4.86		19.53	
	Atopy	8.35	0.40	19.53	0.40
	None	7.94		7.94	
	Smoking	1.00	0.60	9.75	0.70
Organ	None	3.20		7.38	
	Oropharolarynx	2.17	0.50	8.93	0.10
	None	1.00		2.50	
	Abdominal	1.25	0.71	2.92	0.05
	None	2.17		14.64	
Initial Treatment	Cutaneous	1.00	0.30	18.83	0.40
	None	1.43		7.75	
	Antihistamine	3.13	0.40	14.63	0.08
	None	1.13		4.08	
	Epinephrine	4.08	0.90	19.53	0.10
	None	1.34		5.53	
	Glucocorticoids	4.08	0.20	19.53	0.03*
	None	1.00		3.50	
C1-INH	C1-INH	3.20	0.70	6.47	0.90
	None	1.13		7.75	
	FFP	4.53	0.40	9.75	0.30
None	1.14		5.83		

FFP = Fresh Frozen Plasma

Time to event milestone (hours)



Reference

^aLumry WR, Li HH, Levy RJ, Potter PC, Farkas H, Moldovan D, et al. Randomized placebo-controlled trial of the bradykinin B2receptor antagonist icatibant for the treatment of acute attacks of hereditary angioedema: The FAST-3 trial. *Ann Allergy, Asthma Immunol* [Internet]. 2011 Dec 1 [cited 2018 Feb 19];107(6):529-37. Available from: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=med7&NEWS=N&AN=22123383>

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