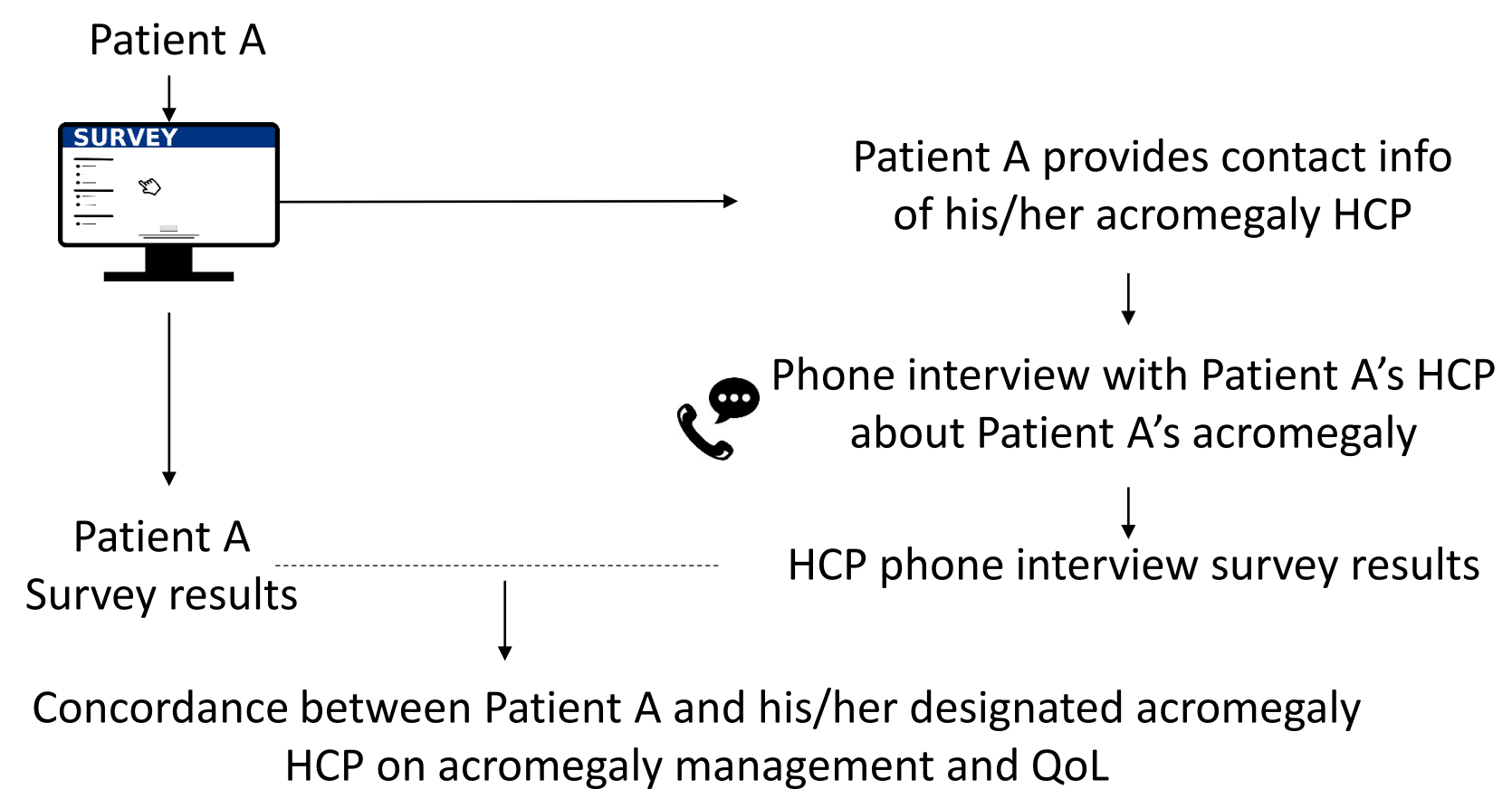


INTRODUCTION / BACKGROUND

- This study was undertaken to understand concordance between outcomes reported by US acromegaly patients treated with long-acting somatostatin analogues (SSA) and those perceived by their treating endocrinology health care professional (HCP)

METHODS



- Acromegaly patients in the US with no change in their mono or combination SSA-based treatment and seen by their treating HCP in the past year, recruited through the Acromegaly Community, completed an online survey focusing on disease management; symptoms; adverse reactions and general health.
- Patients were asked to provide contact information for their acromegaly designated HCP who then completed a telephone interview about their perceptions of that specific patient's disease management
- The study received IRB approval by Tulane University
- Concordance data from the first 30 patient-HCP pairs were analyzed
 - Cohen's kappa for nominal data (e.g., present/absent) or Cohen's weighted kappa for ordinal data (e.g., mild/moderate/severe). Kappa values of <0 represent poor, 0 to 0.20 slight, 0.21-0.40 fair, 0.41 to 0.60 moderate, 0.61 to 0.80 substantial, and 0.81 to 1.0 almost perfect agreement
 - Intraclass correlation coefficients (ICCs) or Lin's concordance correlation coefficients (CCC) for continuous data (e.g., ratings from 0 to 100). ICCs <0.5 represent poor, 0.5 to 0.74 moderate, 0.75 to 0.90 good, and >0.90 excellent agreement; CCCs <0.90 represent poor, 0.90-0.95 moderate, 0.95 to 0.99 substantial, and >0.99 almost perfect agreement
- NOTE: Although mean scores and/or % for a group could be similar, it is still possible that concordance could be poor because concordance is based on agreement between each individual patient-HCP pair**

Demographic and Clinical Characteristics

- Data from 30 eligible acromegaly patients were available
 - 80% F, mean age = 47 ± 12 years, mean time since diagnosis = 10 ± 8 years; 77% have seen their HCP within the past 6 months (**Table 1**)
- Data from 30 HCPs were available
 - Years treating acromegaly patients = 20 ± 13; 63% in academic practice
- Based on data maintained in patients' charts (n=29), 79% of patients were biochemically well controlled (IGF-1 ≤ 1 ULN)
- According to patient ratings of biochemical control, 73% were biochemically well controlled

Symptoms

Frequency and Severity of Symptoms (Table 2)

- Both patients and HCPs agreed that patients experience numerous acromegaly-related symptoms despite being biochemically controlled
- In general, a larger % of patients experienced active symptoms compared to the % reported by their HCPs
- For some symptoms, HCPs were Not Sure about severity of their patients' symptoms (100% for vision problem, 57% carpal tunnel syndrome, 33% acro-fog, 31% snoring and 27% for excess sweating)
- For headache, joint pain, swelling of soft tissue, carpal tunnel syndrome, vision problems and snoring the agreement between patients and HCPs was poor (weighted kappa < 0).
- Patients reported greater severity (moderate to severe) compared to HCP report for numerous symptoms, including excess sweating, joint pain, swelling of soft tissue, carpal tunnel syndrome, vision problems and acro-fog

Pattern of Symptoms (Table 3)

- Patients and HCPs agreed that some symptoms were constant and some symptoms are experienced at the end of the injection cycle
- However, many HCPs were Not Sure of the pattern of when symptoms occurred
- Many more patients reported symptoms at the end of the injection cycle compared to HCPs (patients: up to 42%, HCPs: up to 18%)
- Symptoms commonly experienced by patients (>20%) at the end of the injection cycle were headache, excess sweating, joint pain, soft tissue swelling, carpal tunnel syndrome
- In general, agreement between HCPs and patients was poor on the pattern of individual symptoms (weighted kappa range: -0.2 to 0.046)

RESULTS

Table 1: Demographic & Clinical Characteristics of Acromegaly Pts in this Study

Characteristic*	Results
Female, % (N)	80% (24)
Age, Years, Mean ± SD	47 ± 12
Current SSA, % (N)	
Lanreotide	63% (19)
Octreotide	37% (11)
Medications for Acromegaly, % (N)	
SSA only	63% (19)
Pegvisomant + SSA	17% (5)
Cabergoline + SSA	17% (5)
SSA+ Pegvisomant + Dopamine	3% (1)

Characteristic	Results
Prior treatment % (N)	
Pituitary surgery only	70% (21)
Pituitary surgery and radiotherapy	23% (7)
Duration of Acromegaly, Years, Mean ± SD	10 ± 8
Biochemical control (n=29)	
IGF-1 ≤ 1xULN	79% (23)
1<IGF-1<1.3xULN	7% (2)
IGF-1 ≥ 1.3xULN	14% (4)
# of HCP Visits in Past Year, Mean ± SD	3.2 ± 2.5

* n=30 unless otherwise specified

Table 2: Frequency and Severity of Symptoms Reported by HCPs and Patients (N=30)

Symptom	Reported by HCPs					Reported by Patients				Weighted Kappa
	Experienced Symptom Yes % (N)	Mild % (n)	Moderate % (n)	Severe % (n)	Not Sure % (n)	Experienced Symptom Yes % (n)	Mild % (n)	Moderate % (n)	Severe % (n)	
Headache	67% (20)	30% (6)	50% (10)	15% (3)	5% (1)	80% (24)	54% (13)	21% (5)	25% (6)	-0.17
Fatigue/Weakness/Feeling Tired	87% (26)	19% (5)	62% (16)	15% (4)	4% (1)	80% (24)	13% (3)	67% (16)	21% (5)	0.14
Excess Sweating	37% (11)	9% (1)	55% (6)	9% (1)	27% (3)	70% (21)	52% (11)	33% (7)	14% (3)	0.16
Joint Pain*	73% (22)	23% (5)	50% (11)	18% (4)	0% (0)	83% (25)	20% (5)	48% (12)	32% (8)	-0.26
Swelling of Soft Tissue**	53% (16)	38% (6)	44% (7)	13% (2)	0% (0)	83% (25)	32% (8)	44% (11)	24% (6)	-0.08
Carpal Tunnel Syndrome	23% (7)	14% (1)	14% (1)	14% (1)	57% (4)	67% (20)	70% (14)	25% (5)	5% (1)	-0.05
Vision Problems	7% (2)	0	0	0	100% (2)	54% (16)	63% (10)	25% (4)	13% (2)	-0.17
Snoring	14% (13)	31% (4)	23% (3)	15% (2)	31% (4)	54% (16)	63% (10)	19% (3)	19% (3)	-0.01
Acro-fog	50% (15)	33% (5)	27% (4)	7% (1)	33% (5)	87% (26)	31% (8)	50% (5)	19% (5)	0.15

* 2 HCPs said their patients had joint pain but didn't indicate severity; **1 HCP said the patient had swelling of soft tissue but didn't indicate severity

Table 3: Pattern of Symptoms Reported by HCPs and Patients and Agreement Between Ratings (N=30)

Symptom	HCPs perception of their patients' pattern of symptoms					Patients' report of pattern of symptoms					Weighted Kappa
	Constant % (N)	Right after Injection % (n)	Middle of Cycle % (n)	End of Cycle % (n)	Not Sure % (n)	Constant % (n)	Right after Injection % (n)	Middle of Cycle % (n)	End of Cycle % (n)	Not Sure % (n)	
Headache	45% (9)	0	0	15% (3)	40% (8)	42% (10)	4% (1)	4% (1)	42% (10)	8% (2)	0
Fatigue/Weakness/Feeling Tired	50% (13)	4% (1)	0	15% (4)	31% (8)	83% (20)	0	8% (2)	8% (2)	0	-0.01
Excess Sweating	45% (5)	0	0	18% (2)	36% (4)	43% (9)	5% (1)	5% (1)	29% (6)	19% (4)	-0.2
Joint Pain	55% (12)	0	0	9% (2)	36% (8)	68% (17)	0	0% (0)	32% (8)	0	-0.02
Swelling of Soft Tissue	56% (9)	0	0	6% (1)	38% (6)	56% (14)	4% (1)	0% (0)	28% (7)	12% (3)	-0.1
Carpal Tunnel Syndrome	0	0	0	0	100% (7)	70% (14)	0	0% (0)	20% (4)	10% (2)	0.02
Vision Problems	0	0	0	0	100% (2)	56% (9)	0	13% (2)	0	31% (5)	-0.15
Snoring	46% (6)	0	0	0	54% (7)	75% (12)	6% (1)	0	6% (1)	13% (2)	-0.12
Acro-fog	40% (6)	0	0	7% (1)	54% (8)	92% (24)	0	0% (0)	4% (1)	4% (1)	0.046

Injection Site Reactions

- HCPs and patients agreed that injection site reactions (ISRs) are experienced by a large % of patients [range: 33% to 70% and 47% to 87% based on HCP and patient report, respectively]. Concordance on severity ratings was poor (range: -0.007 to 0.003). In general, patients reported ISRs to be more severe. Many HCPs were Not Sure of the severity of their patients' ISRs (range: 50% to 86%)

General Health Rating

- Mean overall ratings of general health, on a scale ranging from 0 to 100 with 0 = worst health imaginable and 100 = best health imaginable, were low based on both patient and HCP report. Ratings were lower based on patient report vs HCP report (64 ± 18 vs 70 ± 18). Concordance between ratings was poor (ICC=0.19)

Limitations

- Patients were recruited to this study by social media, via the Acromegaly Community patient support group. It is unclear to what extent data from this study are generalizable to other patient populations with acromegaly
- HCPs relied on chart notes and recollection from prior visits when responding to questions

CONCLUSIONS

- This is the first study to evaluate concordance between outcomes reported by acromegaly patients and those perceived by their acromegaly designated HCP
- In general, HCPs were less likely to report that patients were experiencing various symptoms compared to patients. Additionally, HCPs were less likely to report that patients experienced these symptoms at the end the cycle
- HCPs tended to under report incidence and severity of symptoms, and agreement between HCPs and patients was poor on some symptoms
- In general, HCPs reported fewer injection site reactions than patients, and in many cases, were unaware of the severity of the reactions
- Both patients and HCPs reported less than optimal general health ratings. Patients reported worse general health ratings compared to HCPs
- Analyses will be replicated once data from all patient-HCPs pairs are available to confirm these initial findings
- These findings highlight a significant unmet need in the treatment of acromegaly patients**