ACRO-POLIS study
Symptoms and comorbidities at diagnosis of 472 acromegalic patients diagnosed between 2009 and 2014

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Introduction

- Acromegaly is characterized by chronic, excessive secretion of GH and increased IGF-1 levels caused by benign pituitary adenoma. It causes a broad range of signs and symptoms, which may occur over a long period of time and several years before acromegaly diagnosis.

Objective

- The ACRO-POLIS study aimed at describing the symptoms and comorbidities of acromegaly at diagnosis, in a large cohort of patients diagnosed between 2009 and 2014.

Methods

- Observational, cross-sectional, multicentre study conducted in France between September 2013 and June 2014.
- Adult patients with acromegaly diagnosed for less than 5 years were included.
- Data were collected retrospectively from patient medical files and confirmed by patient self-administered questionnaires.

Results

- In total, 648 patients were included in the study.
- The data from 472 patients, who met the selection criteria and had both CRF and patient questionnaire completed, were analyzed.
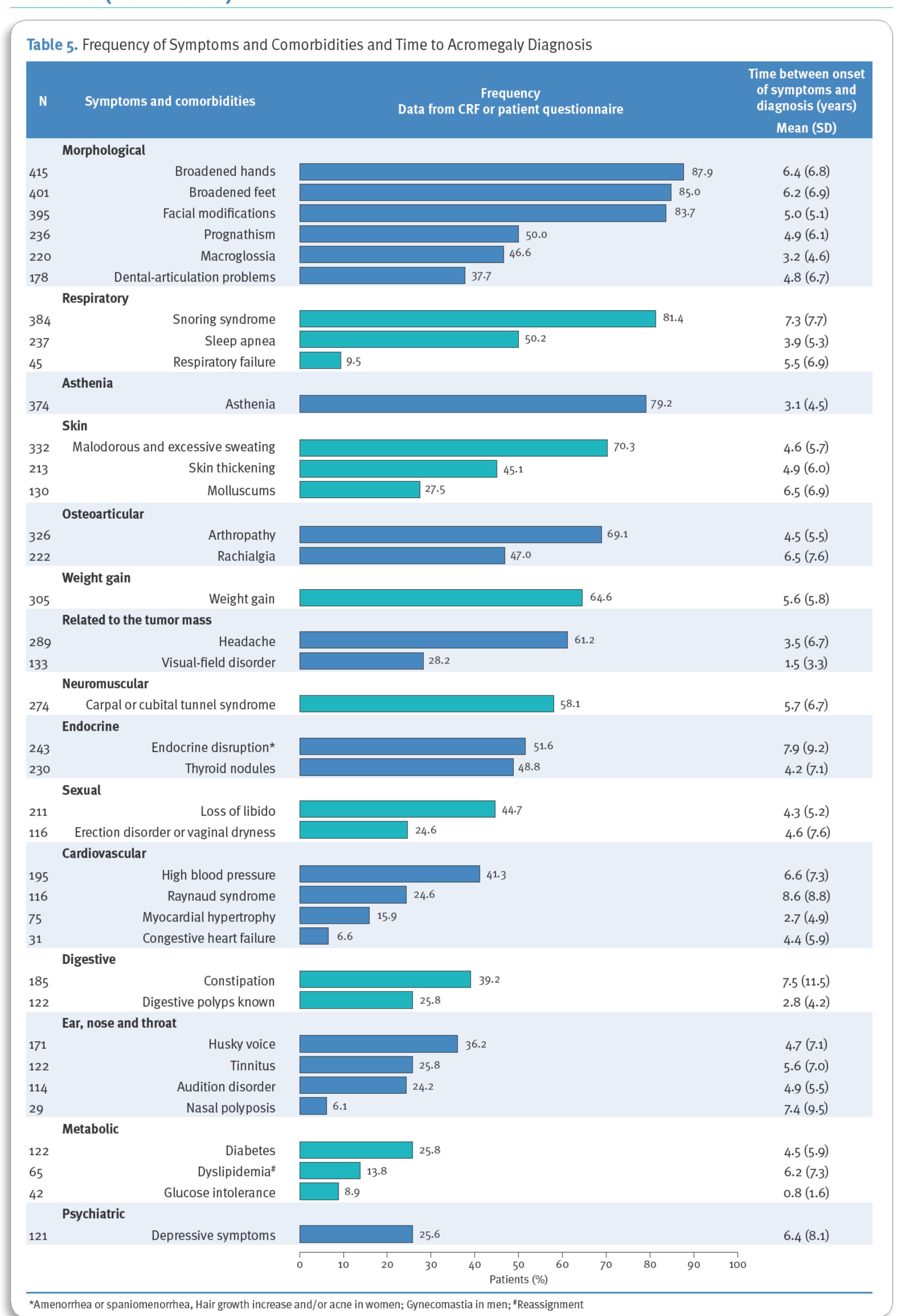
Table 1. Patient Characteristics

		N=472	
Age (years)	Mean (SD)	51.9 (14.3)	
BMI (kg/m²)	Mean (SD)	27.7 (5.3)	
Gender		n	(%)
	Male	202	(42.8%)
	Female	270	(57.2%)

Table 2. Diagnosis of Acromegaly

		N=472	
Time since diagnosis of Acromegaly (months)			
	Mean (SD)	30.6	(17.8)
Acromegaly diagnosed by		n	(%)
	Endocrinologist	126	(29.5%)
	General practitioner*	69	(16.1%)
	Other**	232	(54.3%)

*GP (13.8%) and GP subtitute (2.3%) ** Other specialist (37.2%) and Other (17.1%)

Table 3. Acromegaly Characteristics at Diagnosis

		N=472	
Type of pituitary adenoma		n	(%)
	GH	364	(78.8%)
	GH + Prolactin	84	(18.2%)
Size of tumor	Microadenoma	89	(19.7%)
	Macroadenoma	362	(80.3%)

Table 4. Biological Characteristics at Diagnosis

		N=472
GH (ng/mL)	Mean (SD)	18.7 (30.1)
IGF-1 (% ULN)	Mean (SD)	295 (160)
Serum prolactin (μg/L) for the GH + Prolactin adenoma		
	Mean (SD)	183 (650)

Results (continued)

Table 5. Frequency of Symptoms and Comorbidities and Time to Acromegaly Diagnosis

N	Symptoms and comorbidities	Frequency Data from CRF or patient questionnaire	Time between onset of symptoms and diagnosis (years) Mean (SD)
Morphological			
415	Broadened hands	87.9	6.4 (6.8)
401	Broadened feet	85.0	6.2 (6.9)
395	Facial modifications	83.7	5.0 (5.1)
236	Prognathism	50.0	4.9 (6.1)
220	Macroglossia	46.6	3.2 (4.6)
178	Dental-articulation problems	37.7	4.8 (6.7)
Respiratory			
384	Snoring syndrome	81.4	7.3 (7.7)
237	Sleep apnea	50.2	3.9 (5.3)
45	Respiratory failure	9.5	5.5 (6.9)
Asthenia			
374	Asthenia	79.2	3.1 (4.5)
Skin			
332	Malodorous and excessive sweating	70.3	4.6 (5.7)
213	Skin thickening	45.1	4.9 (6.0)
130	Molluscums	27.5	6.5 (6.9)
Osteoarticular			
326	Arthropathy	69.1	4.5 (5.5)
222	Rachialgia	47.0	6.5 (7.6)
Weight gain			
305	Weight gain	64.6	5.6 (5.8)
Related to the tumor mass			
289	Headache	61.2	3.5 (6.7)
133	Visual-field disorder	28.2	1.5 (3.3)
Neuromuscular			
274	Carpal or cubital tunnel syndrome	58.1	5.7 (6.7)
Endocrine			
243	Endocrine disruption*	51.6	7.9 (9.2)
230	Thyroid nodules	48.8	4.2 (7.1)
Sexual			
211	Loss of libido	44.7	4.3 (5.2)
116	Erection disorder or vaginal dryness	24.6	4.6 (7.6)
Cardiovascular			
195	High blood pressure	41.3	6.6 (7.3)
116	Raynaud syndrome	24.6	8.6 (8.8)
75	Myocardial hypertrophy	15.9	2.7 (4.9)
31	Congestive heart failure	6.6	4.4 (5.9)
Digestive			
185	Constipation	39.2	7.5 (11.5)
122	Digestive polyps known	25.8	2.8 (4.2)
Ear, nose and throat			
171	Husky voice	36.2	4.7 (7.1)
122	Tinnitus	25.8	5.6 (7.0)
114	Audition disorder	24.2	4.9 (5.5)
29	Nasal polyposis	6.1	7.4 (9.5)
Metabolic			
122	Diabetes	25.8	4.5 (5.9)
65	Dyslipidemia#	13.8	6.2 (7.3)
42	Glucose intolerance	8.9	0.8 (1.6)
Psychiatric			
121	Depressive symptoms	25.6	6.4 (8.1)

*Amenorrhea or spaniomenorrhea, Hair growth increase and/or acne in women; Gynecomastia in men; #Reassignment

Conclusions

- This study provides insights about symptoms and comorbidities of acromegalic patients recently diagnosed. Results confirm the broad range of comorbidities at diagnosis and the delayed diagnosis of acromegaly, and therefore highlight the efforts needed to improve the early detection of the disease.