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ACROSTART: Spanish retrospective study to determine the timeframe to achieve hormonal control with initial Lanreotide Autogel treatment in acromegaly patients in routine clinical practice

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Introduction

- Acromegaly is a rare, chronic endocrine disease, characterized by enhanced growth hormone (GH) secretion and elevated insulin-like growth factor–I (IGF-I) levels, the most frequent cause of which is a pituitary adenoma[1]
- Persistently elevated GH and IGF-I levels lead to substantial morbidity and mortality[2]
- Control of GH and IGF-1 secretion is decisive in improving survival,[3] and optimum management of the disease requires a reduction in GH levels to <2.5 ng/mL and normalisation of IGF-1 levels[3]
- Somatostatin analogues (SSAs) have become the pillar of acromegaly medical therapy in patients unsuitable for, or refusing surgery, after failure of surgical treatment, or in selected cases as primary treatment[4]
- Initial recommended doses of the SSA Lanreotide Autogel are 60, 90 and 120 mg administered every 28 days. Experience in Spanish hospitals indicated that a longer dosage interval could be used in well controlled patients with similar efficacy.[5] Starting dose for Lanreotide Autogel prescribed in clinical practice may differ from prescribing recommendations

Methods

Design

- This was a multicentre, non-interventional, retrospective, post-authorisation study performed in 62 adult patients with active acromegaly conducted at 17 centres in Spain
- The decision to prescribe Lanreotide Autogel was made prior to and independently from the patient's enrolment into the study and it was prescribed according to routine clinical practice
- Study included adults with active acromegaly who had been treated with Lanreotide Autogel for at least 4 months, with GH levels <2.5 ng/mL and/or normalised IGF-1 levels on at least two consecutive evaluations
- Patients whose clinical records lacked information regarding the date and initial dose of Lanreotide Autogel and the first hormonal response available were excluded
- Descriptive statistics summarized quantitative variables
- All patients provided written informed consent

Objectives

- The primary objective was to determine the timeframe to achieve hormonal control (defined as GH levels <2.5 ng/mL and/or normalised IGF-1 on ≥2 consecutive evaluations) considering the starting dose and dosage intervals of Lanreotide Autogel commonly used in clinical practice
- The following were secondary objectives:
  - To determine use of healthcare resources until obtaining hormonal control
  - To assess the efficacy of Lanreotide Autogel in controlling tumour size in daily clinical practice
  - To evaluate patients' general satisfaction with Lanreotide Autogel therapy
    - Direct question about satisfaction with 3 possible answers (very satisfied, satisfied, not at all satisfied)
  - To assess patients' adherence to Lanreotide Autogel therapy
    - Information on dose omission and on whether the patient was continuing treatment at the end of the study

Results

Patients

- 62 patients were screened from 08 March to 31 October 2013. Five patients were excluded from the primary analysis set (PAS) because they underwent surgery or received radiotherapy between the initiation of treatment with Lanreotide Autogel and achieving hormonal control
- The PAS population consisted of 57 patients with a median age of 64 years (range 23-90). Demographic characteristics are shown in **Table 1**
- 22.8% of the patients managed injections without assistance of healthcare staff, either with self-injections or with administration by close relatives
- Lanreotide Autogel 120 mg was the most common dose to start treatment (51% patients), with extended dosing interval (6, 8 and 12 weeks) reported in 44% of the patients
- Five different subgroups were considered for the analysis according to starting dosage pattern. Other dosages included: 90 mg/6 weeks (n=4), 90 mg/8 weeks (n=3), 60 mg/8 weeks (n=2) and 120 mg/12 weeks (n=1)

Table 1. Patient demographics and disease characteristics

	PAS N=57	60 mg/ 4 weeks n=13	90 mg/ 4 weeks n=6	120 mg/ 4 weeks n=13	120 mg/ 6 weeks n=6	120 mg/ 8 weeks n=9
Male, n (%)	21 (36.8)	4 (30.8)	1 (16.7)	6 (46.2)	3 (50.0)	3 (33.3)
Patient able to self-inject, n (%)	8 (14.0)	2 (15.4)	2 (33.3)	2 (15.4)	0	0
Injection by family member/relative	5 (8.8)	1 (7.7)	0	1 (7.7)	1 (16.7)	0
Injection by healthcare staff	44 (77.2)	10 (76.9)	4 (66.7)	10 (76.9)	5 (83.3)	9 (100)
Median age at diagnosis, years (range)	51 (13.0; 77.0)	55.0 (26.0; 74.0)	45.0 (21.0; 76.0)	49.0 (20.0; 77.0)	51.0 (13.0; 72.0)	47.0 (34.0; 72.0)
Median time since diagnosis, months (range)	103.5 (8.1; 325.5)	100.7 (14.6; 285.0)	103.7 (8.1; 128.4)	129.9 (19.3; 284.2)	170.1 (17.9; 325.5)	120.8 (41.6; 218.6)
Type of adenoma, n (%)						
Microadenoma	22 (38.6)	8 (61.5)	2 (33.3)	6 (46.2)	0	2 (22.2)
Macroadenoma	35 (61.4)	5 (38.5)	4 (66.7)	7 (53.8)	6 (100)	7 (77.8)
Prior treatment, n (%)						
Surgery	39 (68.4)	8 (61.5)	5 (83.3)	7 (53.8)	4 (66.7)	7 (77.8)
Radiotherapy	14 (24.6)	2 (15.4)	2 (33.3)	6 (46.2)	1 (16.7)	1 (11.1)
Hormonal values before treatment						
GH, ng/mL, mean (95% CI)	5.0 (2.6; 7.4)	4.2 (0.7; 7.6)	13.1 (−11.3; 37.5)	6.8 (0.2; 13.4)	1.9 (0.6; 3.2)	3.3 (1.3; 5.3)
%ULN of IGF-1, mean (95% CI)	1.9xULN (1.6; 2.1)	1.8xULN (1.4; 2.2)	3.3xULN (1.7; 5.0)	1.6xULN (1.2; 2.1)	1.3xULN (0.8; 1.8)	1.6xULN (1.0; 2.2)

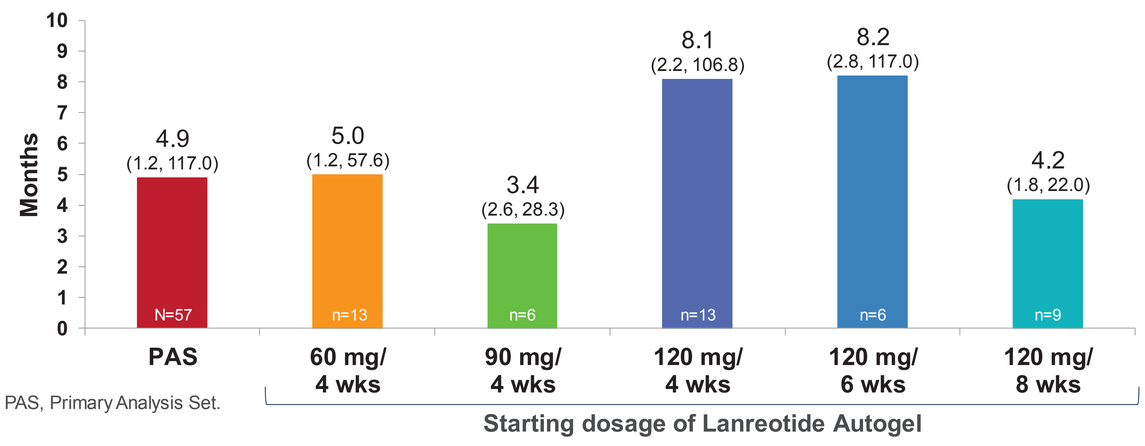
Microadenoma <10 mm, macroadenoma >10 mm. PAS, Primary Analysis Set.

- Mean length of treatment with Lanreotide Autogel was 68 months (95% CI 55-80)

Primary endpoint

- Globally, the median time to reach hormonal control was 4.9 months (range 1.2, 117.0) (**Figure 1**)

Figure 1. Median time to hormonal control, months (range)

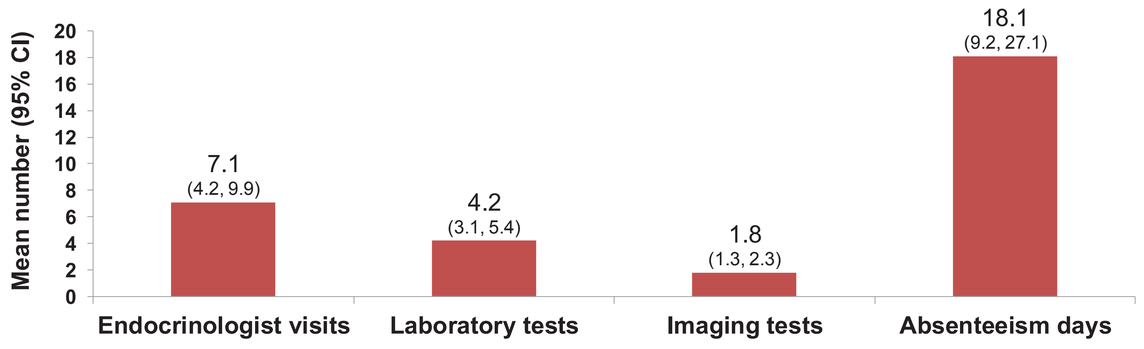


PAS, Primary Analysis Set.

Secondary endpoints

- The use of healthcare resources until reaching hormonal control is shown in **Figure 2**

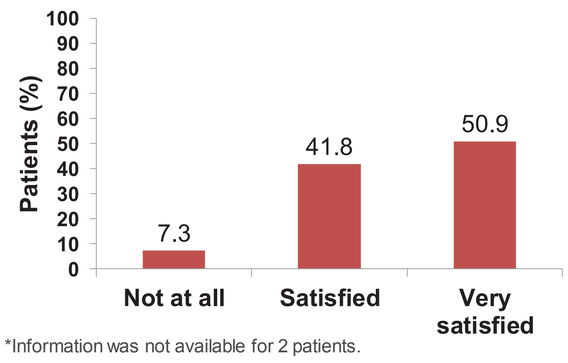
Figure 2. Use of healthcare resources until hormonal control in the PAS population (N=57), number, mean (95% CI)



PAS, Primary Analysis Set.

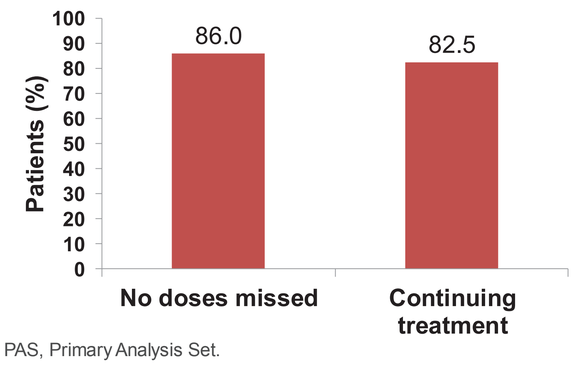
- At the beginning of treatment, the mean maximum tumour volume was 2010 mm^3 (95% CI 0, 5774) for the 19 patients with available information, and it was 1139 mm^3 (95% CI 0, 3185) at last evaluation during treatment for the 24 patients with available information
- Globally, 51 out of 55 (92.7%) patients rated to be satisfied or very satisfied with the Lanreotide Autogel treatment at the end of the study (**Figure 3**)
- There was a very good adherence to therapy (**Figure 4**)

Figure 3. Patient satisfaction with Lanreotide Autogel therapy (n=55)*



*Information was not available for 2 patients.

Figure 4. Patient adherence to treatment in the PAS population (N=57)



PAS, Primary Analysis Set.

Conclusions

- **In a real-life setting, the median time elapsed between initiating treatment with Lanreotide Autogel and achieving hormonal control was 4.9 months with 120 mg being the most common starting dose**
- **One fifth of the patients managed injections without assistance of healthcare staff**
- **Real-life treatment with Lanreotide Autogel led to a fast hormonal control in responder patients, with a high treatment adherence and treatment satisfaction, despite disparity of starting doses and interval dosing**

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