LETTER TO THE EDITOR

Slow-release lanreotide and octreotide LAR in the medical therapy of acromegaly

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The first line of treatment for active acromegaly is still neurosurgery followed by radiotherapy. Octreotide (1), slow-release (SR) lanreotide (2) and octreotide LAR (3) are currently administered before surgery or in patients in whom surgery and/or radiotherapy have failed to restore normal growth hormone (GH)/insulin-like growth factor-I (IGF-I) levels. Cozzi *et al.* (4) have recently shown that octreotide LAR, a somatostatin analogue to be administered at 28-day intervals, seems to be more efficacious than SR lanreotide, a somatostatin analogue administered at intervals ranging from 10 to 14 days. This observation seems quite surprising, as previous studies comparing effectiveness and tolerability of the different somatostatin analogue formulations did not show significant differences. Colao *et al.* (5) observed that SR lanreotide treatment in 45 patients seemed to be just as efficacious as octreotide and to cause a similar incidence of side effects. In the European multicentre study, Lancranjan *et al.* (3) reported that monthly intramuscular administration of octreotide was at least as effective, well tolerated and safe as octreotide therapy of three daily subcutaneous injections.

In a preliminary study, we did not observe significant differences in GH/IGF-I control in 5 patients who were switched from SR lanreotide to octreotide LAR (6).

In Cozzi's paper (4), 12 acromegalic patients (6 men and 6 women; aged 28–76 years) with active disease on chronic SR lanreotide (injections every 7–21 days) treatment (6–24 months) were switched directly to treatment with octreotide LAR (10–30 mg). Data collected on stabilised SR lanreotide treatment were compared after 3 and 6 months of octreotide LAR therapy. Cozzi *et al.* (4) reported normal GH levels (<2.5 µg/l) in 1 and 4 patients after SR lanreotide and octreotide LAR respectively, while age-adjusted IGF-I levels were normal in 4 and 5 patients respectively.

We analysed our data obtained in 12 acromegalic patients (5 men and 7 women; age range 28–75 years) in whom long-term (6–30 months) SR lanreotide treatment (30 mg every 7–20 days) was changed to treatment with octreotide LAR (20–30 mg) without a wash-out period. Data obtained after the first 6–12 months on the two therapies are reported in Table 1. Samples were collected before the following injection.

Table 1 GH and IGF-I levels obtained in individual patients after the first 6–12 months of SR lanreotide or octreotide LAR therapy. GH levels above 2.5 µg/l and IGF-I levels above the normal age-adjusted range were not considered to have been normalised by therapies. The normal age-adjusted range of IGF-I was established in a population of 231 control subjects. Normal IGF-I ranges in subjects aged 18–29 (65 subjects), 30–49 (69 subjects), 50–59 (35 subjects), 60–69 (36 subjects) and over 70 (26 subjects) years were 104–421 µg/l (median 241 µg/l), 74–359 µg/l (median 175 µg/l), 56–312 µg/l (median 129 µg/l), 57–224 µg/l (median 122 µg/l), and 67–185 µg/l (median 118 µg/l) respectively.

Case	Age (years)	Previous therapy*	GH (µg/l)†		IGF-I (µg/l)	
			SR lanreotide	Octreotide LAR	SR lanreotide	Octreotide LAR
1	28	Adx, Rt	11.6 (10)	5.4 (30)	791	829
2	30	Adx	4.4 (10)	1.6 (30)	416	352
3	48	Adx	1.7 (20)	3.1 (10)	267	337
4	52	Adx, Rt	1.0 (10)	3.4 (20)	147	452
5	52	Adx, Rt	4.6 (10)	3.8 (20)	372	267
6	54	Adx, Rt	1.6 (10)	0.4 (20)	218	91
7	63	Adx, Rt	4.5 (10)	4.8 (20)	202	196
8	65	None	2.8 (10)	2.0 (20)	216	277
9	70	Adx, Rt	1.1 (10)	2.5 (20)	183	135
10	70	Adx, Rt	2.9 (7)	3.1 (30)	234	338
11	73	Adx, Rt	0.7 (7)	0.6 (30)	104	112
12	75	None	3.6 (10)	2.7 (20)	251	173

* Adx: previous neurosurgical treatment; Rt: previous radiotherapy. † The interval (days) between SR lanreotide injections and the individual dosage (mg) of octreotide LAR are indicated in brackets.

After the switch to octreotide LAR, mean serum GH ($2.8 \pm 0.4 \mu\text{g/l}$) and IGF-I ($296.6 \pm 57.9 \mu\text{g/l}$) levels were similar to those found on SR lanreotide therapy (GH: $3.4 \pm 0.8 \mu\text{g/l}$; IGF-I: $283.4 \pm 52.4 \mu\text{g/l}$). After 6–12 months of octreotide LAR, normal GH and IGF-I levels were noted in 42% and 67% of patients, whereas GH/IGF-I levels were normal in 42% and 58% of patients after SR lanreotide respectively (Table 1). Slight side-effects were recorded only in 50% of patients during SR lanreotide and octreotide LAR therapy.

Our data obtained in a small series of patients with active acromegaly do not confirm the conclusion reached by Cozzi *et al.* (4) that octreotide LAR offers better control of GH/IGF-I hypersecretion than SR lanreotide. Larger patient populations may be required in order to make a more meaningful comparison. Moreover, as already reported in other clinical studies with SR lanreotide (2, 5), our data support the effectiveness of octreotide LAR in normalising IGF-I levels in a large percentage of patients. Finally, it must be considered that long-acting somatostatin analogues improve patient compliance with medical therapy for acromegaly.

References

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Received 12 February 2000

Accepted 14 February 2000