INTRODUCTION

Recombinant growth hormone (GH) is reimbursed for the treatment of short stature (<−2.5 Z-score) in children born small for gestational age (SGA) without postnatal catch-up growth, aged ≤ 4 years with a height Z-score >1 below mid-parental height (MPH).

AIM

To determine the current GH prescribing practices by pediatric endocrinologists for SGA-related short stature and document the percentages of treated children at risk for a poor adult height outcome.

PATIENTS AND METHODS

Clinical and auxological data of 146 short children available on a total of 157 children who started a GH therapy in 2017 and 2018 for SGA related short stature. Data were retrieved from BELGROW, a national database for GH treated children held by the BESPEED. Patients were followed by pediatric endocrinologists in 15 hospitals. References used for height and weight Z-score calculations were:

- At birth: Niklasson, 1991 [1, 8] (IF GA >28.5 weeks)
- Intergrowth, 2018 [1, 8] (IF GA >28.5 weeks)
- At parental height (MPH): SDS was calculated as father’s height SDS + mother’s height SDS/2. Results are presented as median (P10; P90) or percentages.
- Age at start GH >11 years, height Z-score <−3 at start and having a father/mother with a height Z-score <−2 (shortest parental height: SPH) were defined as predictive parameters of poor adult height outcome after GH therapy.

RESULTS

In total, 99 patients started GH therapy after peer-review of the files organized by the BESPEED. 100 (68%) patients fulfilled strictly all the reimbursement criteria (figure 1). Not presenting a height Z-score <−2.5 was the most frequent aberration (18%). Patients whose files were peer-reviewed had a higher reimbursement criteria agreement (83% vs 38%) (figure 1), were also shorter and lighter at start of GH and had more often a prepubertal status (82% vs 64%) (table 1).

CONCLUSIONS

Currently, GH is prescribed in patients with SGA related short stature in as many girls as boys, but with a quarter starting during adolescence, more than a half having a severe height deficit and a quarter with a father or a mother with a short stature, putting them at risk for a poor outcome.

Our findings highlight the utility of a peer review system and the ongoing need to raise awareness for earlier referral to pediatric endocrinologists of short SGA children in order to obtain a better adult height outcome.

REFERENCES

3. Roelants M. et al. Reimbursement criteria, 52 (52%) had a height Z-score <−2.5 and 27 (27%) a SPH Z-score <−2, who were more often prepubertal (82% vs 64%) (table 1).

Among the 100 patients respecting strictly all reimbursement criteria, 52 (52%) had a height Z-score <−3 and 27 (27%) a SPH Z-score <−2, who were more often prepubertal (82% vs 64%) (table 1).

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