

Study of height increase and drug side effects in recipients of Cinnatropin growth hormone one year after treatment in patients referred to the endocrinology clinic of Bu Ali Hospital in Ardabil in 2020-2022

Abstract

Background: Growth disorder is a term that refers to the stop or reduction of children's growth rate and it manifests in three forms: thinness, short height and low weight (1). According to the definition, short stature is a state in which the child's height on the growth curve is below the third percentile or two standard deviations below the average and expected for age and sex in the reference group. Considering that the import of foreign drugs into the country has been prohibited for many years, since 2019, all patients with short stature were treated with synatropin. Synatropin is an Iranian injectable growth hormone. has been

Aim:The purpose of this study was to investigate the therapeutic effect of treatment with artificial growth hormone (cinnatropin) in children with short stature due to various underlying reasons.

Materials and Methods: The present study was a descriptive-analytical study that was conducted retrospectively. The statistical population of the study was the patients receiving cinnatropin growth hormone referred to the endocrinology clinic of Bu Ali Hospital. The sample size of this study was 200 patients. Finally, the information required for the study was collected using a researcher-made checklist and was performed using SPSS version 22 statistical software.

Results: 57.5% of the examined patients were female and most of the patients were in the age range of 5 to 12 years (74%), the most common indication for starting the treatment was GHD (41%). The average age of the examined patients was 2.96 ± 10.25 years. The average height and Z score of the treated children increased by 78.4 ± 8.78 cm and 1.99 ± 0.52 units, respectively, which was statistically significant (in both cases > 0.001 P). The effect of drug treatment with cinnatropin was also investigated by gender, age range and therapeutic indication, and the results showed a significant increase in height in both genders ($P < 0.001$), in all three age ranges: 5 years, 5 to It was 12 years and more than 12 years and also in all treatment indications ($P < 0.001$). Changes in Z score also showed a

significant difference in females by gender ($p = 0.002$), while during the analysis by age group, patients with an age of less than 5 years did not have a significant change in Z score ($= 0.15$). P). Also, Z score changes were significant in all therapeutic indications except PAH ($P=0.05$) and GSS ($P=0.59$).

Conclusion: Based on the results obtained in the present study, administration of cinnatropin at a younger age significantly increased height, so it is recommended to consider the administration of cinnatropin at a younger age according to indication.

Key words: Synatropin, somatropin, short stature, growth hormone, z score