

# TREATMENT OUTCOME OF GROWTH HORMONE IN TURNER SYNDROME CHILDREN

Poster number

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## Background

- Turner syndrome (TS) patients frequently have short stature. Females adults with TS are usually 20 cm shorter than normal females.
- Growth hormone (GH) can improve final height in TS patients.
- Final height can reach 150 cm in TS patients with GH treatment.

## Objectives

- The aims of study was to evaluate GH therapy for children with Turner syndrome in term of efficacy and side effect

## Methods

- This serial cases study was done in TS patients in a period August 2018 to April 2019.
- Patients were enrolled if they had at least 1 year of GH treatment. The patients were diagnosed and treated in Vietnam National Children's Hospital. GH was indicated in TS patients when height was less than - 2SD according to WHO 2007. The starting dose of GH was 0.05 mg/kg/day.

## Results

- In our study 49 TS patients were enrolled: 19 patients with 45,X (38.8%); 15 TS patients with mosaics (30.6%); 15 patients with structural abnormalities (30.6). Mean age at study time was  $8.2 \pm 3,5$  (Min = 1; Max = 15).

**Table 1:** Height SDS change during GH treatment in TS patients aged < 5 years

Age	GH treatment in years	Height SDS
Age < 5 years (n=9)	Before treatment (n=9)	$(-2.98) \pm (-1.87)$
	1 year (n=9)	$(-2.33) \pm (-1.77)$
	2 years (n=6)	$(-2.00) \pm (-1.66)$
	3 years (n=4)	$(-1.53) \pm (-0.78)$

**Table 2:** Height SDS change during GH treatment in TS patients 5 -<10 years

Age	GH treatment in years	Height SDS
Age 5- < 10 years (n=20)	Before treatment (n=20)	$(-3.44) \pm (-2.13)$
	1 year (n=19)	$(3.02) \pm (-1.98)$
	2 years (n=7)	$(-2.22) \pm (-1.30)$
	3 years (n=4)	$(-2.78) \pm (-1.00)$
	4 years (n=2)	$(-2,89) \pm (-0,34)$

## Results

**Table 3:** Height SDS change during GH treatment in TS patients 10- < 15 years

Age	GH treatment in years	Height SDS
Age 10- < 15 years (n=20)	Before treatment (n=20)	$(-2.67) \pm (-2.00)$
	1 year (n=20)	$(-2.58) \pm (-1.73)$
	2 years (n=12)	$(-2.00) \pm (-0.67)$
	3 years (n=6)	$(-1.89) \pm (-1.11)$

- In patients aged from 5 to < 10 years, height SD score increased from  $(-3.44) \pm (-2.13)$  before GH treatment to  $(-2.89) \pm (-0.34)$  3 years after GH treatment.
- In patients aged from 10 to < 15 years, height SD score increased from  $(-2.67) \pm (-2.00)$  before GH treatment to  $(-1.89) \pm (-1.11)$  3 years after GH treatment.
- During GH treatment: 6 patients (12.2%) had headache; 1 patient (2.0%) had arthralgia. No patient was required to stop GH treatment.

## Conclusions

GH treatment was effective in increasing height SD score in TS patients.

In younger TS patients, GH treatment had better effectiveness in improving height SD score

These side effect were mild and transient.

## References

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