

Does treatment with gonadotropin releasing Hormone (GnRH) analogues affect BMI in children with precocious or early puberty?

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OBJECTIVES AND METHODS

OBJECTIVES: To assess the change in body mass index (BMI) in children treated with GnRH analogues within a UK endocrine service and to analyse the patient/parent experience of the treatment

METHODS: A retrospective study along with a questionnaire survey of patient/parent experience of the treatment was conducted. Data were collected from patients with precocious puberty on GnRH analogues for at least two years. Baseline BMI was compared with BMI at 2-years post treatment. An anonymised questionnaire survey assessed patients' experience of treatment, associated side effects and overall satisfaction of the services

RESULTS

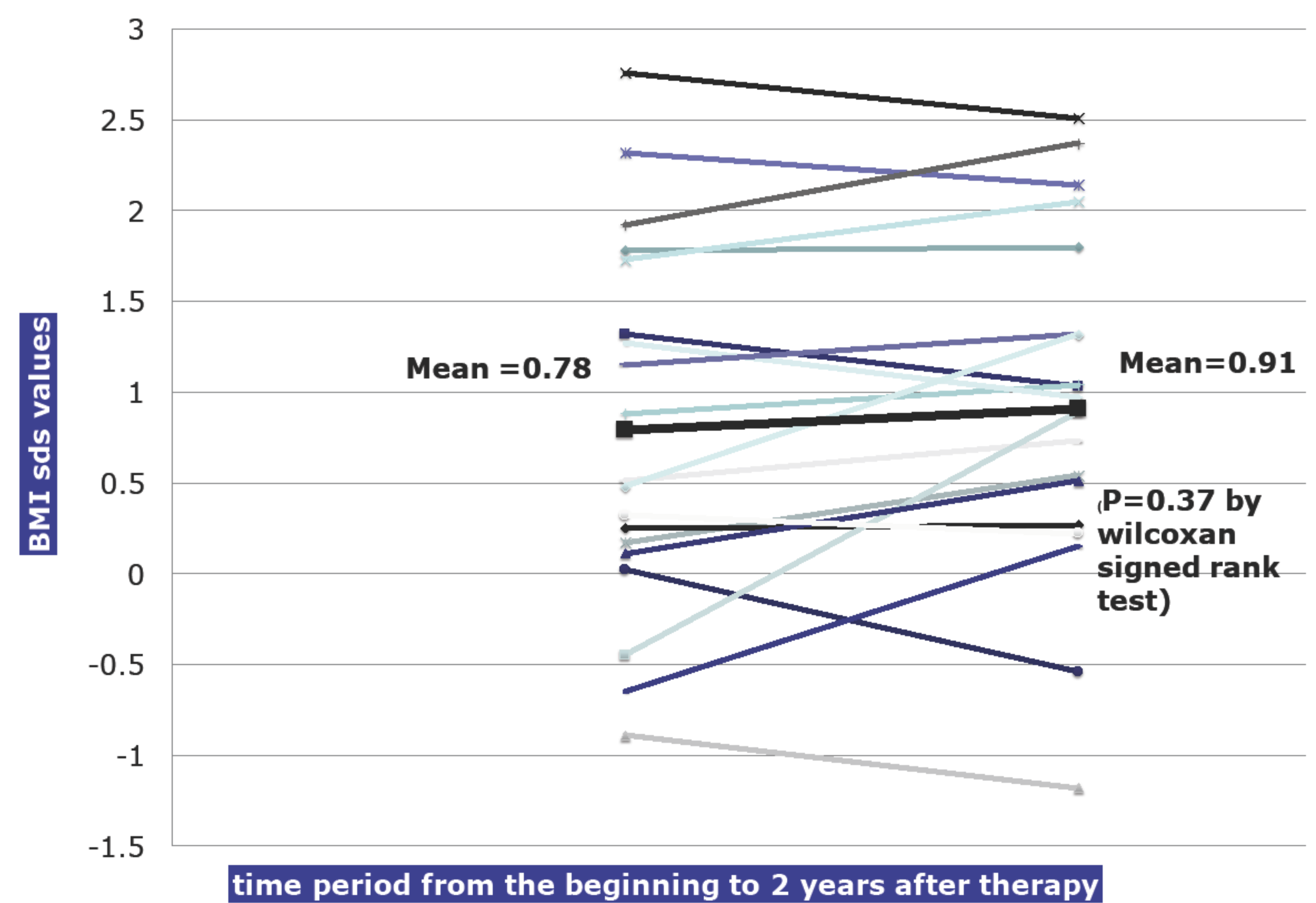
- ❖ 10% of children ($n=2$) were obese (BMI SDS +2 to +3) prior to treatment, while 21% were obese at 2 years of treatment ($n=4$).
- ❖ BMI SDS showed an increasing trend (0.78 to 0.91) but this was not statistically significant ($p=0.379$).
- ❖ 92% of patients were either satisfied or very satisfied with the service.
- ❖ 70% of patients did not report any side effects ($n=14$).
- ❖ 30% ($n=8$) of patients perceived weight gain.

CONCLUSIONS

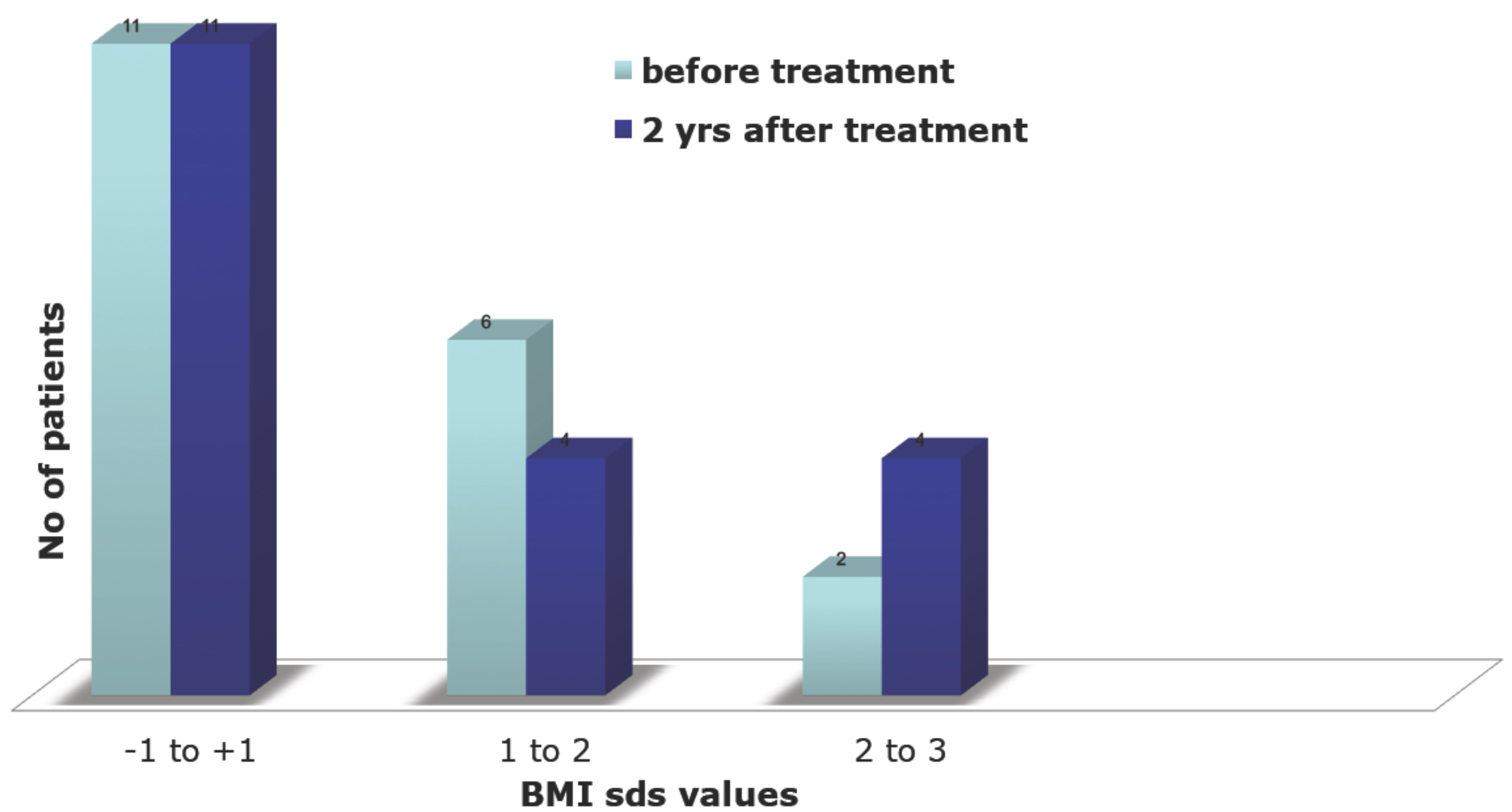
- ❖ In our study population there was an increase in incidence of obesity in children on GnRH analogues over a two year period.
- ❖ However, there was no statistically significant change in the BMI SDS of study population both during treatment and after stopping therapy. This is in agreement with the recent consensus statement(2009)¹.

GRAPHS

BMI SDS TREND



OBESITY IN THE STUDY POPULATION



REFERENCES

1. Carel JC *et al.* Consensus Statement on the Use of Gonadotropin-Releasing Hormone Analogs in children. *Pediatrics* 2009; 123; e752
2. Anna Maria Pasquino *et al.* Long-Term Observation of 87 Girls with Idiopathic Central Precocious Puberty Treated with Gonadotropin-Releasing Hormone Analogues. *Journal of Clinical Endocrinology & Metabolism*. Jan 2008;93(1) 190-5.

