Detection and referral of children with short stature in Serbia - the impact of electronic growth charts

INTRODUCTION

Timely recognition of growth disorders in childhood is of great importance, in large part because it can result in earlier detection of both endocrine and non-endocrine disorders underlying poor growth velocity. In countries with highly developed health information systems (HIS), early detection of short stature (SS) is facilitated by automated anthropometric and statistical calculations, with warning alarms and suggestions for referrals when prespecified conditions are met (e.g. when the child crosses major percentile lines because of poor growth velocity etc.). However, in countries where HIS are in development, the resources available are insufficient for the implementation of such complex automated anthropometrics and referrals, although simpler, graphical-based growth e-charts could be implemented with the potential to assist physicians in detection of growth disorders just by illustrating growth visually. Such electronic growth charts (EGC) were implemented in Serbia during the year 2015.

OBJECTIVE

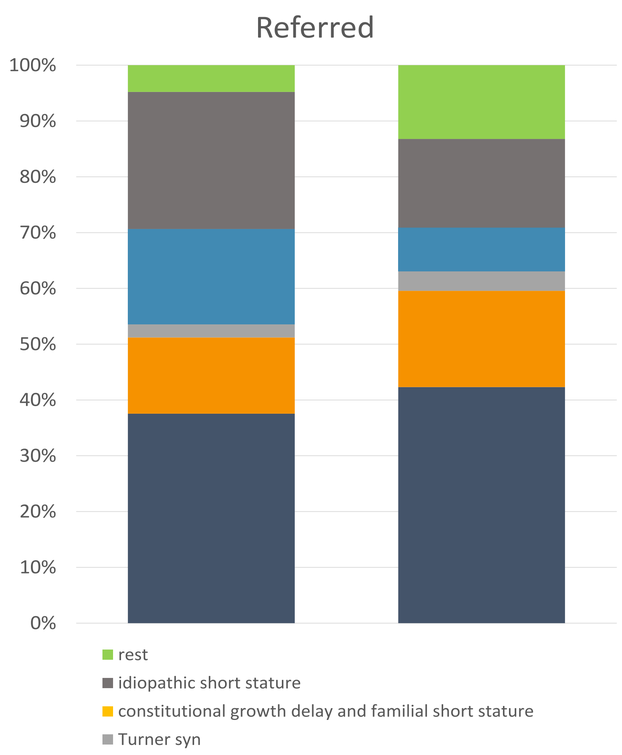
Determine if the introduction of EGC in Healthcare system of Serbia resulted in changes regarding the age of referral and number of referred children, gender and aetiology of SS in children referred to tertiary centre for paediatric endocrinology for endocrine evaluation of SS.

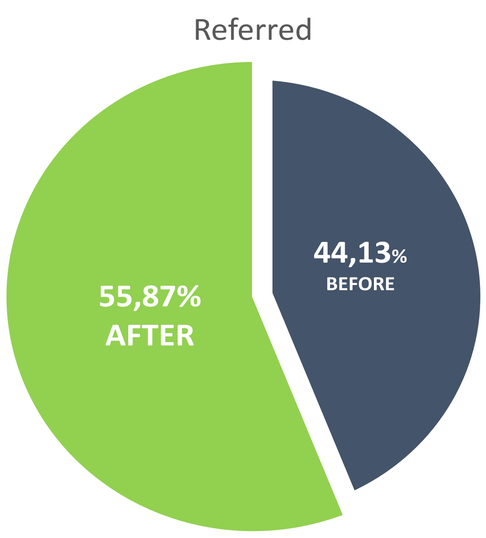
METHOD

Data was collected from the medical documentation of the department of endocrinology of the Mother and Child Healthcare Institute of Serbia „Dr Vukan Cupic“. Records of 664 children that were referred to our clinic were analysed – first group (n=293) consisted of all children referred during two years prior to the implementation of EGC in Serbia (from January 1st 2013 to January 1st 2015), and the other group (n=371) was comprised of all children referred to our centre after the EGC implementation (January 1st 2016. - January 1st 2018). Epidemiological data, anthropometric measures and bone maturity, as well as final diagnoses regarding aetiology of the SS were collected on all subjects.

RESULT

When we compare groups before and after implementation EGC, we can see that there were more referred patients after implementation (293 vs.371, p=0,113). Among referred patients after, there were more them with growth hormone deficiency (110 vs.157, p<0,001), but less with normal variants of short stature (88 vs.122, p<0,001).





CONCLUSION

Our data showed that in countries where sources are poor and without enough oportunity for implementation such a complex automated system for growth supervision, even simple graphic charts like ours (EGC) can improve early detection of growth disorders and increase the percentage of detection pathological causes of short stature.

References

1. Stalman E. S, Hellinga I, Von Dommelen P, Hennekam R, Saari A, Sankilampi U, Dunkel L, Wit M. J, Kamp A. G, Plötz B. F (2015) Application of the Dutch, Finnish and British Screening Guidelines in a Cohort of Children with Growth Failure. Horm Res Pediatr 84:376-382
2. Hoepffner W, Plaffle R, Gausche R, Meigen C, Keller E (2011) Early Detection of Growth Disorders With the CrescNet System at the Leipzig Treatment Center. Dtsch Arztebl Int 108(8):123-8

Panic Zaric S. | Vukovic R. | Milenkovic T. | Mitrovic K. | Todorovic S. | Soldatovic I.

Mother and Child Healthcare Institute of Serbia „Dr Vukan Cupic“ Belgrade, Serbia

58ESPE P1-369

GH and IGFs

Sanja Panic

Poster presented at: ESPE 2019 VIENNA

PosterSessionOnline.com