



BASAL LEVELS OF FSH AND LH CAN BE HELPFULL IN DIAGNOSIS OF PUBERTY PRECOCIOUS?

Ulku Gul, Bahadır Samur, Leyla Akın, Nihal Hatipoglu, Mustafa Kendirci, Selim Kurtoglu
Erciyes University, Faculty of Medicine, Pediatric Endocrinology Department

INTRODUCTION

Luteinizing hormone stimulating hormone (LHRH) test is the gold standard test in the diagnosis of puberty precocious (PP). The basal levels of FSH (follicular stimulating hormone) and LH (luteinizing hormone) cannot be always reliable. Basal levels of LH can be below the cut-off 0.3 IU/L or even unmeasurable (<0.1 IU/L) in some of PP cases. In this study, we aim to investigate there lation between the LHRH test and basal levels of FSH and LH.

METHOD

Girls referred to pediatric endocrine clinic with the symptoms of puberty started before the age 8 are investigated. 89 girls diagnosed as central PP between January 2014- June 2015 were involved in the study. Exogenous causes are excluded. Laboratory examination (LH, FSH and estradiol), bone age and pelvic ultrasonography performed in all patients. LHRH test performed in all the patients with LH level sunder 0.3IU/L. Peak LH > 5 IU/L accepted as positive for the test. There lation between basal hormone levels and LHRH test results are investigated.

RESULTS

The ages of the patients ranged from 3.08-9.75 years. LHRH test performed in 59 patient. 39 patients (66.1%) with basal LH <0.1 IU/L test results and 22 of them (56.4%) had peak LH >5 IU/L. There was no correlation between basal LH and peak LH significant relation between basal FSH and peak LH (p <0.001, r: 56), There was no correlation between basal and peak LH when the effects of bone age excluded.

CONCLUSION

Basal LH levels below 0.1 IU/L is not reliable to exclude PP. In our study, 56.4% of the patients had unmeasurable basal LH levels but diagnosed as central Puberty Precocious with the LHRH test and clinical findings. Some of the investigators revealed that FSH secretion starts in prepubertal period and LH pulsations becomes dominant at the stage 2 puberty. Significant correlation of basal FSH and peak LH in this study, may suggest that basal levels of FSH can be predictive of PP diagnosis. Futher investigations are needed with larger patient groups.

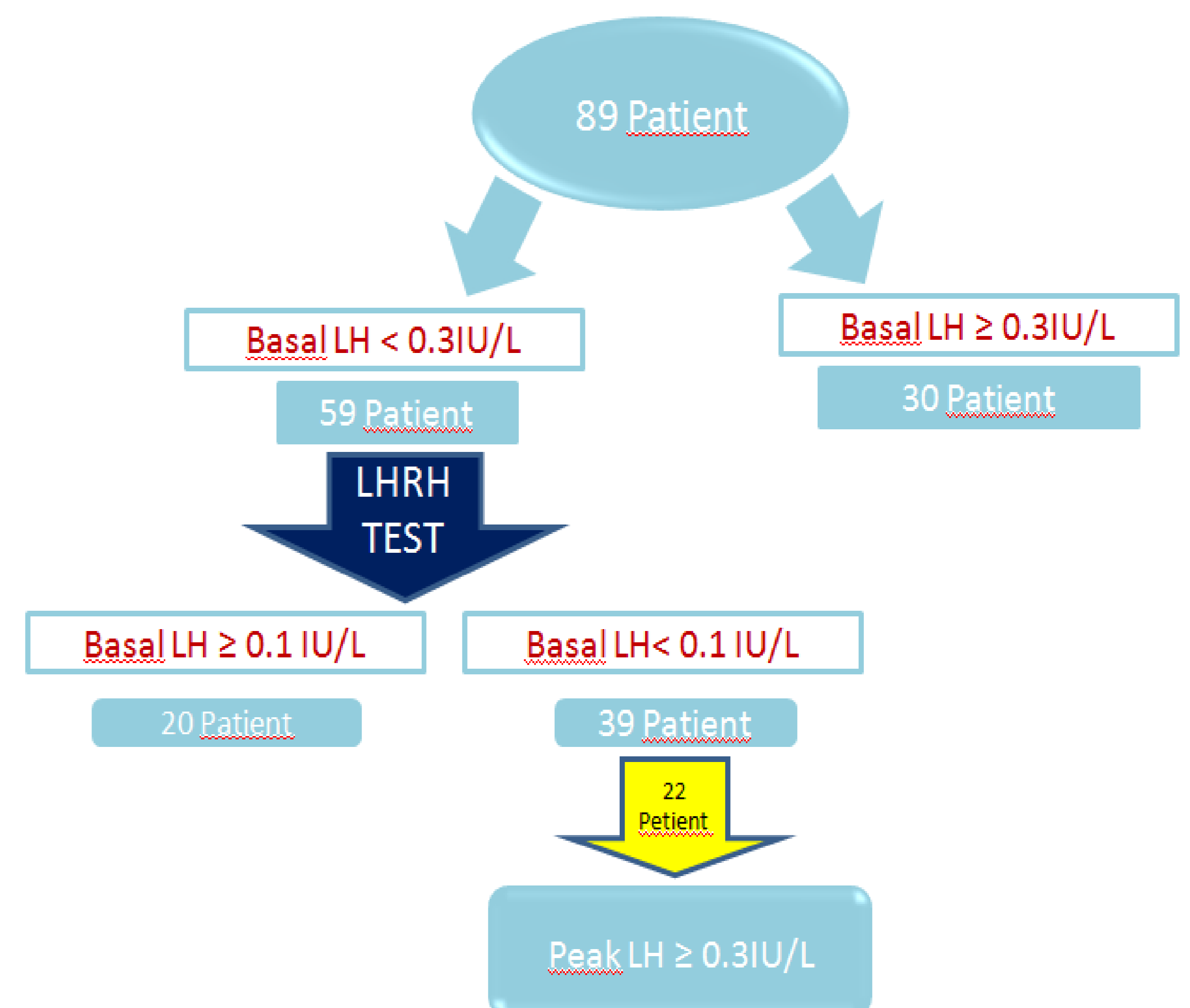


Table 1: Relationship Basal FSH/LH and peak FSH/LH

	Peak FSH	Peak LH
Basal FSH	r:10 P=0.44	r:56 P<0.001
Basal LH	r:-52 P=0.69	r:27 P=0.032

Table 1: Relationship Basal FSH/LH and peak FSH/LH without effects of bone age

	Peak FSH	Peak LH
Basal FSH	r:9 P=0.53	r:59 P<0.001
Basal LH	r:-0.4 P=0.97	r:40 P=0.53

