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## *Readers' Forum*

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### Early Puberty

*Q. Theoretically only girls below eight years of age having changes of puberty can be labelled as cases of precocious puberty. However, in practice we occasionally encounter girls aged nine or ten years having changes of complete puberty, i.e., menarche, thelarche and adrenarche. These young girls are children and not even teenagers. Retardation of linear growth vis a vis development of secondary sex characters puts these girl children as well as their parents under great mental stress. How should we deal with such cases?*

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**A.** Pediatricians all around the world see young girls of 9 and 10 years of age with complete evidence of puberty characterized by menarche, thelarche and adrenarche. In addition there is premature pubertal growth acceleration with the final adult height being less than that suggested by genetic potential. If pubertal growth spurt has already occurred, very limited growth potential remains and treatment may not affect ultimate height. Thus, the two reasons for medical management will be (i) to stop or cause regression of pubertal changes, and (ii) to improve adult height potential in these children. The tall stature for age and the advanced pubertal development in young girls can cause social and psychological adjustment problems especially with early menarche. These are indications for counselling in addition to consideration of medical treatment to suppress

the excessive growth rate and pubertal advancement.

Whether the early or precocious puberty is treated medically or not, the parents and children need to understand what is happening. In early puberty normal development is occurring at a relatively early period. It should be understood that psychosexual development is generally commensurate with age and not physical maturity.

Offering medical therapy in such situation needs an individualized approach with social and psychological assessment of the child, parents and the family. GnRH (LHRH) agonist analogues because of their ability to stop gonadotropin production have been tried to stop further pubertal development with probable gain in height. Potential for further height gain needs to be clarified before initiating therapy. Regression of puberty does not occur in all cases but GnRH analogues may prevent further pubertal advancement.

The GnRH agonist analogues available in India include buserelin (Suprefact, nasal spray and IM injections), triptorelin (Decapeptyl depot IM injections) and goserelin (Zoladex depotsc injections). Luprolide (Lupron) is not marketed in India. The effectiveness of these drugs need to be monitored by clinical evaluation and hormone testing including GnRH stimulation. Following discontinuation of treatment, gonadotropin levels and responses promptly return to pubertal levels with progression of pubertal development. While these drugs are effective in regression or cessation of further pubertal

advancement in very young girls below 8 years especially those with hypothalamic hamartoma, their effectiveness in older children is unpredictable. Danazol has no proven role in management of such children. Thus counselling of parents is very essential before initiating therapy with GnRH analogues.

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