

# Persistent isolated cyclical vaginal bleeding (premature menarche) not associated with GnRH pubertal response or endometrial echo should be considered for examination under general anaesthesia (EUA)

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## BACKGROUND & OBJECTIVES

### BACKGROUND:

- Isolated prepubertal menarche is described in the absence of other signs of precocious sexual development<sup>1</sup> and is a self-limited condition<sup>2</sup>.
- This condition remains unclear in its aetiology and there is currently no consensus on investigations to be undertaken.

### OBJECTIVES:

To evaluate the following factors associated with persistent isolated cyclical vaginal bleeding:

- Clinical presentation
- Gonadotrophin-releasing hormone (GnRH) stimulation test
- Genital examination under anaesthetic (EUA)
- Pelvic ultrasound findings

## METHODS

- Retrospective case series of 14 girls with isolated prepubertal menarche
- Data collection from 2 centres between January 2007 and December 2014
- All girls presented with persistent cyclical vaginal bleeding with no other signs of precocious puberty

## RESULTS

### DEMOGRAPHICS

	Mean	Range
Age (years)	7.4	5.0 to 9.67
Height SDS	0.33	-1.02 to +1.68
Weight SDS	1.01	-0.74 to 2.76
BMI	19.6	14.6 to 29.3

- Vaginal bleeding was reported to be cyclical, ranging from 1 weekly to 3 monthly, lasting 1-4 days in duration.
- Bleeding persisted between 6 to 18 months in all girls
- Pelvic ultrasound showed prepubertal uterus with no identifiable endometrial echo in all girls

### GnRH STIMULATION TEST

	Mean	Range
LH peak (U/l)	3.1	0.3 – 14
Peak LH/FSH Ratio	0.23	0.07 – 0.66

- Oestradiol levels were < 100 pmol/l in all girls
- Bone age showed no advancement in all girls
- EUA was normal in 7 out of 8 girls.
- One girl was found to have 1.5 cm foreign body; she presented with cyclical vaginal spotting weekly for 6 months prior to EUA

## CONCLUSIONS

- Persistent isolated cyclical vaginal bleeding was not associated with identifiable endometrial echo on pelvic ultrasound, GnRH pubertal response or elevated oestradiol levels.
- Low oestradiol levels may result in an increased sensitivity of the of the endometrium resulting in vaginal bleeding.
- EUA should be considered in persistent isolated cyclical vaginal bleeding to exclude other causes such as a foreign body

## REFERENCES:

1. Shanthi M. Pinto, Anne S. Garden. *American Journal of Obstetrics and Gynaecology* 2006; 195: 327-329
2. Aikaterini A.Nella, Paul B.Kaplowitz, Mary Scott Ramnitz, Radha Nandagopal. *Journal of Pediatric Endocrinology and metabolism* 2014; 27(9-10): 821-825

