



AN ALGORITHM COMBINING ULTRASOUND MONITORING AND URINARY LUTEINIZING HORMONE TESTING: A NOVEL APPROACH FOR TIMING INTRAUTERINE INSEMINATION



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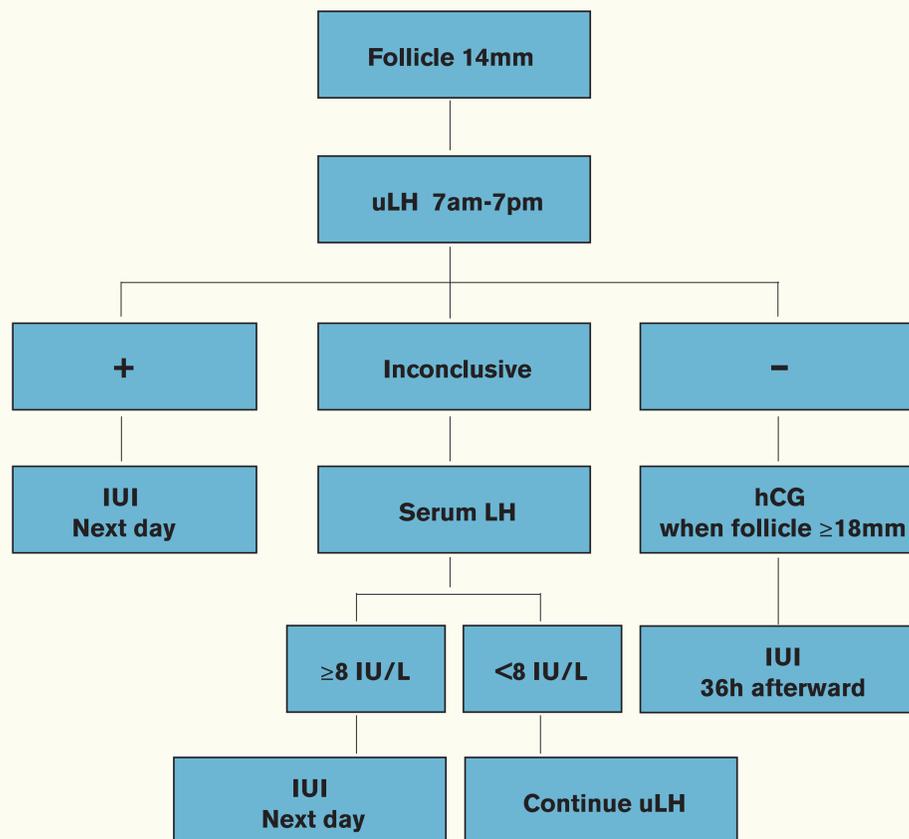
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INTRODUCTION

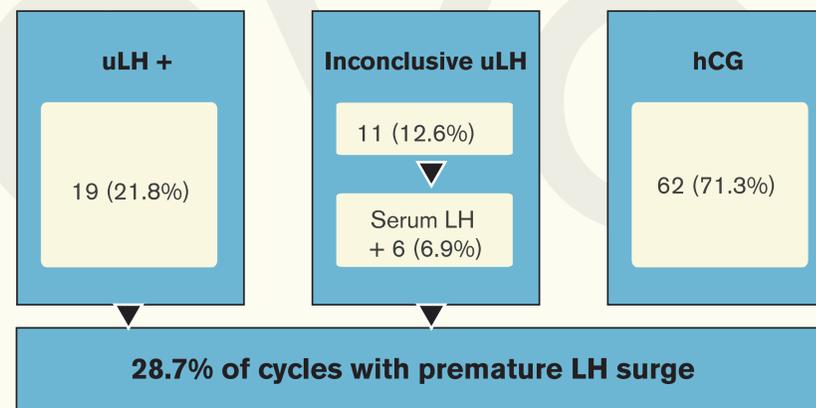
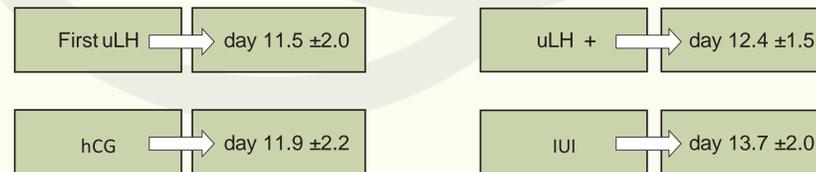
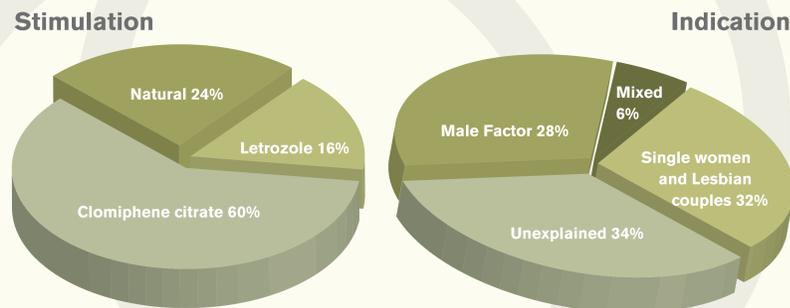
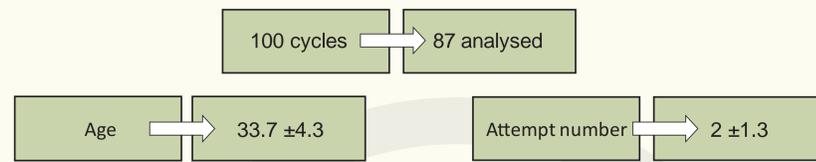
- Intra-uterine insemination (IUI), generally in combination with ovarian stimulation, is one of the most commonly used infertility treatments.
- Accurate timing of insemination, to coincide with ovulation, has an important impact on success rate.
- Optimal timing of insemination is achieved by either :
 - Monitoring follicular growth through serial ultrasound measurements followed by human chorionic gonadotropin (hCG) administration;
 - Detection of luteinizing hormone (LH) surge by urine LH testing (uLH).
- In cycles where follicular growth is monitored, there is a possibility of premature LH rise before hCG administration, which may affect the outcome of treatment.
- The objective of current study was to determine the frequency of spontaneous LH surges, as measured by urine LH testing, in serial ultrasound-monitored IUI cycles.

MATERIAL AND METHODS

- A pilot prospective study was conducted at OVO FERTILITY clinic from July to October 2009
- 100 IUI cycles in 89 patients were included and patients with Polycystic Ovary Syndrome excluded
- Conceive® urine LH kits were used according to a novel algorithm:



RESULTS



Positive LH by used stimulation

Stimulation	LH+ (%)	hCG (%)	p-value
Natural	7 (33.3)	14 (66.6)	0.76
Clomiphene Citrate	15 (28.8)	37 (71.2)	
Letrozole	3 (21.4)	11 (78.6)	

Positive LH by IUI indication

Indication	LH+ (%)	hCG (%)	p-value
Single women and Lesbian couples	11 (39.3)	17 (60.7)	0.33
Unexplained	9 (30.0)	21 (70.0)	
Male Factor	4 (16.7)	20 (83.3)	
Mixed	1 (20.0)	4 (80.0)	

Pregnancy result by IUI timing method

	LH+ (%)	hCG (%)	p-value
Positive pregnancy test	6 (24.0)	11 (17.7)	0.51

CONCLUSION

- A significant proportion of patients undergoing ultrasound-monitored IUI cycle had spontaneous LH surge before ovulation triggering was scheduled.
- A full prospective study should be conducted to determine if, by adding urinary LH testing in addition to ultrasound monitoring, IUI pregnancy rates can be increased.