The clinical usefulness of salivary progesterone measurement for the evaluation of the corpus luteum function.

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Abstract
The present study was designed to construct reliable daily salivary progesterone profiles throughout the luteal phase to accurately evaluate the corpus luteum function. Furthermore, we investigated the clinical relevance of a simple midluteal salivary progesterone estimation for the diagnosis of luteal phase insufficiency by determining the diagnostic efficiency and cutoff values. A total of 121 women were divided into 3 groups; normal luteal function, luteal phase insufficiency and unclassified group, based on basal body temperature recordings and serum progesterone levels at 3 sampling points during the midluteal phase. Salivary progesterone values across the luteal phase of the normal luteal function group were significantly increased from day 1 to day 4, remained constant from day 5 to day 9 (mean +/− SD, 318 +/− 170 pmol/l on day 5, 287 +/− 169 pmol/l on day 9; urinary LH surge = day 0) and decreased thereafter. Salivary progesterone concentrations in the luteal phase insufficiency group showed significantly lower values compared with those in the normal group between days 3 and 10. The cutoff values of 189 pmol/l in the midluteal phase yielded a sensitivity of 78.0% and a specificity of 76.5%. Our results suggest that daily salivary progesterone profiles during the luteal phase and a simple estimation of midluteal salivary progesterone appeared to be useful for the diagnosis of luteal phase defects.