Abstract

This thesis deals with salivary cortisol levels measured by the ADVIA: Centaur CP Immunoassay System. Experimental saliva sampling was performed on 141 probands from age 7 to 76. Volunteers were divided to groups according to their sex: males, females using hormonal contraceptives (HC) and females not using HC. Reference intervals of morning and evening salivary cortisol were defined: females not using HC 13,2 – 55,5 nmol/l and females using HC 15,5 – 44,2 nmol/l for morning salivary cortisol. Females not using HC 4,0 – 16,6 nmol/l and females using HC 7,9 – 22,6 nmol/l for afternoon salivary cortisol. Males 15,8 – 47,7 nmol/l for morning salivary cortisol and 5,2 – 25,4 nmol/l for afternoon salivary cortisol. Differences in stated intervals were imperceptible in all monitored groups. However, it is necessary to maintain different reference intervals for both morning and evening sampling. Reference interval for morning sampling was 14,3 – 46,2 nmol/l and reference interval for afternoon sampling was set at 4,0 – 22,2 nmol/l. Daily profiles of salivary cortisol were determined in 6 females and 4 males in four different parts of a day. The course of salivary cortisol levels corresponded in females not using HC, females using HC and males with circadian rhythm, which is subject to cortisol. Salivary cortisol concentration of all midnight samples was lower than 9 nmol/l which is usually considered as a cut off for Cushing's syndrome (CS) diagnosis. Measured levels of salivary cortisol set according to two different sampling systems Salivette made by Sarstedt clinically did not differ significantly. Salivary cortisol and serum cortisol levels correlate well and it has been proved that salivary cortisol levels reflect rerum cortisol levels.

Keywords

Immunoanalysis, Cushing's syndrome diagnostics, circadian rhytm, salivary cortisol, reference interval, salivette, serum cortisol.