



ABSTRACT

Present study highlights the possible association of psychiatric behavior of different patients with thyroid abnormalities. Three groups were defined to evaluate the relative concentrations of thyroid hormones in their serum. Group 1 comprised of 52 psychiatric patients (32 male and 20 female) with prior history of suicide attempt. Group 2 consisted of 30 (22 female and 8 male) psychiatric patient with no previous history of suicide attempts. The blood samples of Group 1 and Group 2 were obtained from Punjab Institute of Mental Health, Lahore. Group 3 includes 133 (70 female and 63 male) healthy subjects. Comparison of the mean serum concentration of FT₄, FT₃ and TSH in above subjects of three groups showed that FT₄ and TSH levels in suicidal patients were not different from psychiatric patients and normal subjects. However, serum FT₃ in suicidal patients was significantly lower than psychiatric patients as well as healthy subjects (3.7 ± 0.8 VS 4.4 ± 0.6 & 4.0 ± 0.6 pmol/L; $p < 0.05$ both). Average FT₃/FT₄ ratio (degree of deiodination) in suicidal patients was 0.25 that was slightly lower than that of healthy subjects (0.26) but the difference was not significant ($p = 0.62$). Similarly spearman correlation coefficient between FT₄ and FT₃ in suicidal and normal patients was slightly different and non-significant (0.2 VS 0.3; $p = 0.64$). In suicidal group female patients had significantly lower FT₃ levels as compared to male patients (3.4 ± 0.6 VS 3.9 ± 0.8 pmol/L; $p = 0.01$) but education level and place of residence has no effect on serum FT₃ levels. Thus in suicidal patient serum FT₃ levels is significantly lower as compared to non-suicidal and healthy subjects. This difference is more pronouncedly in female suicidal patients and is independent of patient's education and place of residence. This FT₃ deficiency has a potential to be used as a biomarker in postmortem samples in suicidal completers and can be explored in further studies.