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## Dysthyroidism: Is this one of suicide squads?

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**Introduction:** For a decade S. Korea has the highest suicide rate among OECD countries even with fabulous medical check-ups and insurances. But unfortunately, Thyroid Function Test (TFT) has not been included in routine check-ups. Even if asked, blood sampling and follow-up is relatively ignored compared with expensive ultrasonography to rule out cancer, which threatens to everyone. Many symptoms of psychiatric disorder are known to be interfered by dysthyroidism. But in the case of subclinical dysthyroidism, treatment strategies are controversial. We've found how many psychiatric outpatients are suffered from subclinical dysthyroidism and their relation with autonomic nerve system activity and clinical improvement.

Methods: The three-hundred three four outpatients who visited E&M psychiatry clinic from November 2016 to June 2017 were recruited and Two-hundred forty four subjects which met diagnostic criteria of schizophrenic spectrum disorder, affective spectrum disorder and anxiety spectrum disorder (F20 – F45 by ICD-10) were finally eligible for this study. Patients who were diagnosed with pervasive developmental disorder and any psychiatric disorder due to general medical condition were excluded for minimizing confounding variables. The 244 cases were divided into two groups as euthyroid hormone group (EH) and dysthyroid hormone group (DH), depending on whose blood concentration of either Thyroid Stimulating Hormone (TSH) or free T4 are in the normal range of reference values or not. Besides lots of psychiatric scales, Heart Rate Variability (HRV) Tests and Blood concentrations of Thyroid hormones were especially performed to all patients, both results of which are hardly interfered by transient affective state. SCL-90R and Clinical Global Improvement scale (CGI) were also performed to know the severity of symptoms and improvement in both groups. Descriptive statistics were used to know how many patients belong to dysthyroidism and incidences of co-morbidity, such as addictive disorder, which's known as difficult to treat and have very poor clinical course. ANCOVA was used to evaluate the differences between euthyroid and dysthyroid group to check whether dysthyroid state relates with autonomic nerve system activities and CGI. Partial correlation and Multiple regression analysis were conducted to determine thyroid hormone as a predictive value.

Results: 1) 20.93% of psychiatric outpatients are turned out to have dysthyroidism: Which means nearly 21 of 100 people visit psychiatry clinics are in abnormal thyroid states. 2) Among those, 90% even didn't know that they had thyroid problems and 10% of them knew their thyroid problems, but just as unsignificant or unrelated with their affective states. 3) SCL-90R and CGI score (not shown above) in DH group after administration of T4 or PTU showed significant clinical improvement (p<0.01), including co-morbid addiction pathology with affective disorder and with panic disorder even without any anti-addictional agents. 4) The DH group, of which TSH or Free T4 values were out of normal range, was positively correlated with Total Power (TP) score of autonomic nervous system. This result might be due to over-compensation of parasympathetic nervous tone. 5) Multiple regression showed dysthyroid state could be the predictive value for assessment of clinical course and determinants of prescribing thyroid-related agents for improvement in a psychiatric perspective.

Conclusion: This Study has successfully showed that 1) TSH and Free T4, which are known to be related with oxidative stress and degeneration in neurons, are one of major predictive factors in planning treatment strategy and assuming prognosis. 2) Even though it's been ignored and world-widely controversial, we've found that administration of T4 or PTU is absolutely required if blood concentration of TSH or Free T4 is out of normal range, regardless of any psychiatric diagnosis. 3) Co-morbid addictional disorders were improved so surprisingly without any anti-addictional drugs, irrespective of which patterns are substance or behavioral and clinical periods. 4) Repeated multi-centered study should be required as soon as possible to check and validate this result, so as to be one of references for establishing national policy of suicide prevention in South Korea.

## Biography

Kim Hyunchul M.D. Psy. lives in South Korea, tries to share accurate information about Psychiatry with anyone who are interested in our minds. Respects all authentic phenomenon, belongs to self-psychology. From his perspective, in 21th Century, Narcissism and Perversion are believed to be the main causes, which make personality more explicit and destructive. Besides about 10 books, he has often shown in mass-media, not to be just famous, but to share how Psychiatry works people healthier in these days.

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