A Clinical Report of Psychosis Associated with Hyperthyroidism.

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Psychiatric disorders have been recognized to appear in hyperthyroidism. The hyperthyroidism occasionally presents a variety of psychotic syndroms, such as acute delirious states, schizophrenia, manic-depressive psychosis, involutional type depressions and paranoid states. There has been considerable diversity of opinion on the relationship between the mental alterations and hyperthyroidism. It is the purpose of this report to represent a case of psychosis in hyperthyroidism.

CASE

A 49-year-old housewife was admitted to our clinic on July 27, 1961, for mental consultation. She graduated from a senior girls' high school, and married at 23 years old. She has a son and a daughter. She is the owner of a lodging-house. Her husband is an official.

PAST HISTORY

She had been taken gonorrhpea at 27 years old. No abortus and no early birth.

FAMIIY HISTORY

She has a son and a daughter. Her brethren are 3 brothers and 2 sisters. Her elder brother seems to be mentally eccentric and her father, died at 74 years, was a hard drinker. Her mother is in good health, but she is mentally excitable and eccentrical character. In this patient pedigree, it may be suggested that her mother and elder brother will be schizoid.

PRPRESENT ANAMNESIS

Before July, 1961, patient was good social and clear character. She noticed that she had become thin from March, 1961, but she did not feel to be sick, so she leaved as it was. From May, 20, 1961, she complained of general fatigue and thirst. Having been sickly face and becoming thinner day by day, she was consulted by her family physician. And then she went to a hospital frequently to receive a medical treatment for Basedow's disease. From July 10, listening to voice of

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lodgers' conversations, she got anxious and said that they abused her and backbit of her. At midnight, she cried, "Someone pursues me! I'll be killed! I'm terrible!" and she did not sleep well. One day, she let her husband inspect an empty room at midnight, because she thought that someone was in the room.

On July 19, she was admitted to a hospital and was initially treated with Lugol's solution. On the morning of July 23, suddenly she ran out from her room and cried "Someone pursues me! Someone robbs me of my money!", hiding her money under her bed.

Scince entering the hospital, she was always afraid of something without taking a meal. And at midnight of July 26, she agitated and excited, "Someone is out of the door! I'll be killed!" The patient did not allow the nurse to come near her, resisting with fruitknife. She was very excited and dangerous.

On July 27, 1961, the patient visited our clinic with her husband and was admitted to our hospital, immediately.

STATUS PRAESENS

A. MENTAL STATE

On admission, she was dilusional, hallucinating, stiff features, agitated, fearful, mistrustful and refusal. The consciousness was almost clear with good orientation. She had no insight and she had the ideas of persecution, delusions that she would be killed, and delusions of reference that she would be abused. She was in psychotic state with agitation, bad contact and refusal for medical examination. Always, she took precautions against all of the men. She complained of general exhaustion, weightloss, very sweaty, thirst and palpitation.

B. SOMATIC SYMPTOMS AND MEDICAL EXAMINATIONS

She was very thirsty and bad nutritional. Her height and weight were 149 cm. and 30.5 Kg., respectively. She had a marked exophthalmus, strong tremor of tongue, lips and extremities. Regular heart rate of 110 and blood pressure of 146/70. The skin was smooth, fine and warm, and she was perspiring. The thyroid gland was palpated to be very swelled up into fist-size with horseshoe-form, but elastic soft. The hemoglobin was 13.3 gm. per 100 ml., hematcrit 41.2 %, the redcell count 4.13 M per cm., and the white-cell count 5400 with a normal differential proportion. The serologic test for syphilis was negative.

Urinary protein was 10 mg. per 100 ml., urinary sugar was negative, urobilinogen was normal and urinalysis was normal. Serum protein was 7.4 gm. per 100 ml. and blood sugar was 75 mg. per 100 ml. Serum albumin, globulin, cholinesterase, alkaline phosphatase, phenol turbance test, urea nitrogen, non-protein nitrogen, cephalincholesterol flocculation and icteric index were within normal values. Protein bound iodine was 6.1 micrograms per 100 ml., cholesterol was 253 mg. per 100 ml., and the basal metabolic rate was +86.2 %. Urinary excretion of 17-

keto-steroids was 2.3 mg. per 24 hours and of 17-hydroxy-corticosteroids 4.9 mg. per 24 hours. Decrease in blood eosinophil count after 4 hours by intramuscular injection of 20 U. ACTH-Z was 0.8 % and after 8 hours 0 %.

The electrocardiogram showed sinus tachycardia, and the electroencephalograph was nothing particular. Chest X-rays revealed generalized emphysematous.

The patient was treated with methylthiouracil (methiocil), chlorpromazine, chlordiazepoxide and combined vitamins after completion of labaratory examinations.

DISCUSSION

It is well known that acute brain syndroms such as toxic exhaustion psychoses and acute delirious states are observed in some hyperthyroid patients. Several investigators proposed that the "typical" psychosis accompanying with thyrotoxicosis is a manic-depressive psychosis. Other workers, however, have failed to support the view that the manic-depressive psychosis is the typical psychotic reaction in thyrotoxicosis. It has been accepted that brain syndroms in hyperthyroid patients are not only manic-depressive psychosis, but also a variety of syndroms such as schizophrenia, acute delirious states, depressive state, paranoid state and catatonic states. The psychotic state in this patient is hallucinating, delusional and catatonic.

The treatment consisted of simultaneous administration of methiocil and chlorpromazine. The methiocil was given first in 0.1 mg. and then increased to 0.3 mg. daily dosage. The chlorpromazine was administered in 75 mg. daily dosage. The combined vitamins were employed as adjunctive therapy. Continuing these medications, she showed a gradual and steady relief from her more florid psychotic symptoms and her mental condition continued to improve. She was hospitalized for 3 months. Although at admission the bassl metabolic rate was +86.2% and protein bound iodine was 6.1 micrograms per 100 ml., at discharge basal metabolic rate was +14.9 % and protein bound iodine was 4.6 micrograms per 100 ml.

It was noted by several investigators that, there was a parallel relationship between the severity of thyrotoxicosis and the associated psychotic symptoms and that the chemical effects of the thyrotoxicosis such as a direct toxic effect of hormon produce the psychosis. In the present case, this temporal relationship was observed. On the other hand, it was proposed by other groups that the patient who was produced psychosis by hyperthyroidsm must have had a predisposition to psychosis.

It might be possible that from her family history, this patient must have had a predisposition to psychosis, and that the psychosis is activated by hyperthyroidism. We have continued to observe with strong interest on her psychiatric process and on her thyrotoxic process.

In the state of April, 1965, she is mentally and physically in good condition.

SUMMARY

A case of hyperthyroidism associated with psychosis of a 49-year-old housewife was reported.

A pararell relationship between the hyperthyroidism and the associated psychotic symptoms was observed.

The psychotic symptoms was improved by treatment of hyperthyroidism and by administration of psychotonica. It might be noted that the patient in the present report has a predisposition to psychosis.

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