

## MYXOEDEMA PRESENTING WITH PSYCHOSIS

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### SUMMARY

Presented here is the case report of a lady who was referred for evaluation and management of frank psychotic manifestations. A carefully taken history and physical findings pointed to the presence of hypothyroidism. This was later confirmed by laboratory evaluation. The patient improved after thyroxine supplementation.

### Case Report

A 28 year old female patient was admitted with a history of abnormal behaviour that developed 23 days after a gynaecological procedure.

History dates back to three and a half years prior to admission when she gradually developed puffiness of face and swelling of the whole body. She also developed a hoarse voice. Four months later, she was found to be sitting alone; talking, weeping or smiling to herself without reason. When asked, she said that she was hearing voices speaking to her. For these complaints, she was seen in a local hospital and started on tablets containing thyroxine. No other treatment was given. Apparently, a diagnosis of hypothyroidism had been made on clinical grounds alone. She improved and was advised to continue the drug lifelong. However, four and a half months ago (soon after her marriage), she stopped taking these tablets. She developed amenorrhoea 3 months ago. Thirteen days prior to admission, she developed bleeding per vaginum. Nine days later she was admitted to the gynaecology ward where she underwent dilatation and curettage

on that very day for incomplete abortion. Three days later, she was found to be withdrawn and talking irrelevantly and hence was transferred to the psychiatry ward.

On examination, patient was found to be very pale, had a puffy face, and non-pitting oedema of the feet and legs. Skin was dry and scaly, and voice hoarse. There was no goitre. Blood pressure was 100/70 mm Hg and pulse rate 84/minute. Jugular venous pressure was not elevated. Except for a soft systolic murmur at the base of the heart, no abnormality was detected in the cardiovascular system. Respiratory system and abdomen were clinically normal. On mental status examination, the patient was found to be fully conscious but not cooperative for detailed interview. She however said that she heard voices asking her not to do any work at all. The voices were threatening at times. She heard the birds speaking to her. Assessment of intelligence showed the I. Q. to be 56, suggesting mild mental retardation. No other neurological deficit was found.

A clinical diagnosis of myxoedema presenting with psychosis (i.e. organic

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hallucinosi) was made and the patient investigated. Haemoglobin : 5.2 gm %; WBC:9800/mm<sup>3</sup>; N:65, L:33, E:2, ESR: 80 mm at the end of 1 hour. Peripheral smear showed microcytic picture. Serum creatinine:1 mg%; Serum Fasting cholesterol (total):138 mg%; Serum total thyroxine:1.8ng% (Normal 4.7-12 ng%); Serum TSH:40  $\mu$ U/ml (Normal 1-9  $\mu$ U/ml); Serum albumin:4.5 gm%; Globulin:3.6 gm%. Electrocardiogram showed low voltage QRS complexes. Chest X-ray was normal. With these investigations, the diagnosis of primary myxoedema was confirmed. The patient was started on thyroxine supplementation. Considerable improvement occurred in three days (with respect to psychosis), but hallucinations persisted for about 1 month. Patient did not have any psychosis after that. At the time of discharge, patient was receiving 150  $\mu$ g thyroxine daily.

### Discussion

In 1949, Richard Asher, for the first time used the term "myxoedematous madness" to describe the psychotic illness he observed in 14 patients of overt myxoedema. He described this as one of the most important, one of the least known, and one of the most frequently missed causes of organic psychosis. Though the condition was soon recognised as a distinct clinical entity, nearly 4 decades after its first description, we do not have any firm criteria for diagnosing this illness. Further, hypothyroidism is less likely to be suspected in a patient attending a psychiatry department with symptoms of mental illness.

Myxoedematous madness is an acute or chronic organic brain syndrome occurring in cases of severe hypothyroidism. Though dullness and decrease in mental activity is relatively common in clinically

apparent hypothyroidism, frank psychosis is considered to be uncommon.

Although the case presented above had organic hallucinosi, other manifestations like delusions and bouts of restless behaviour (usually violent) are common (Asher, 1949; Anonymous, 1977; Sanders, 1962). Delusions have a paranoid or persecutory nature and may have a depressive flavour. Hallucinations are usually auditory. It is important to remember, that these may transiently exacerbate during initial stages of thyroxine replacement. Though complete recovery occurs in a majority of cases, in some patients, paranoid features persist. As far as psychosis is concerned, it is believed that longer the myxoedema is left untreated, poorer is the prognosis (Asher, 1949). So myxoedema presenting with psychosis must be diagnosed at the earliest. For doing so, strong clinical suspicion is necessary. Puffiness of face, non-pitting oedema, hoarse voice, bradycardia, thick dry scaly skin and slowing of mentation are considered to be typical features. But the typical description is not the rule but the exception (Asher, 1949). Incorrect diagnosis followed by wrong treatment has its own problems. Gomez and Scott (1980) have reported that cardiac arrest occurred in a patient of myxoedematous madness who was given only the conventional antipsychotic drugs. They believe that the combination of hypothyroidism and cardiotoxicity of the psychotropic drug contributed to the cardiac arrest.

Laboratory investigations (like T<sub>4</sub> & TSH) should be used to supplement and not supplant clinical suspicion of myxoedema. Abnormal thyroid function tests have been found in psychiatric patients (Cohen and Swaigar, 1979). These changes however are transient and hence can not be used as the sole parameters

for the diagnosis of hypothyroidism in a patient with psychosis.

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#### References

- Anonymous. (1977). The thyroid gland and the psychiatrist, (editorial). *British Medical Journal*, 1, 931-932.
- Asher, R. (1949). Myxoedematous madness. *British Medical Journal*, 2, 555-562.
- Cohen, K. L., Swaigar, M. E. (1979). Thyroid function screening in Psychiatric patients. *Journal of the American Medical Association*, 242, 255-257.
- Gomez, J., Scott, G. (1980). Hypothyroidism, psychotropic drugs and cardiotoxicity. *British Journal of Psychiatry*, 136, 897-912.
- Sanders, V. (1962). Neurological manifestations of myxoedema. *New England Journal of Medicine*, 266, 547-552.