KRYPTOPYRROL IN URINE

The test measures the porphyrin derivative kryptopyrrol (Mauve factor), 2,4 dimethyl-3 ethylpyrrol, in urine. Clinical elevated urinary levels of kryptopyrrol (pyrroluria) have been found in 30-40% of schizophrenic patients, in alcoholics, in hyperactive children, and in stress and violence-prone individuals.

PYRROLURIA

Kryptopyrrol is a porphyrin derivative. Porphyrins are cyclic compounds that readily bind metal ions. They are formed by the linkage of 4 pyrrole rings and constitute haeme-proteins, including haemoglobin, myoglobin and cytochrome P450. The major sites of haeme-biosynthesis are the liver and the erythrocyte producing cells of the bone marrow. The haeme-proteins are constantly being rapidly synthesized and degraded.[1] Inherited or occasionally acquired defect in haeme-synthesis can result in accumulation and increased excretion of porphyrins or porphyrin precursors.[1] Clinical manifestations may be neurovisceral and/or cutaneous. Only a small number of people with inherited enzyme deficiency (porphyrias) will develop an overt clinical disease, mainly because of precipitating factors, such as drug use, lead poisoning , hormonal causes, infection, caloric restriction and alcohol abuse.[3] Kryptopyrrol was present in the urine of patients with hereditary porphyria during attack and in remission, but not in those with latent porphyria.[6]

The condition of pyrroluria is associated with a deficiency of vitamin B6 (pyridoxine) and zinc.[5] Besides the characteristic symptoms, the patients may exhibit white spots on fingernails, loss of dreaming, a distinctive sweetish breath odor and abdominal pain in the left upper quadrant.

TESTINDICATIONS

- Anorexia
- Anemia that does not repond to iron
- Alcoholism
- Autonomic dysfunction
- Chemical exposure[4]
- Cutaneous photosensitivity
- Hyperactivity
- Heavy metal poisoning (lead)
- Menstrual irregularities
- Neuropsychiatric symptoms
- Schizophrenia
- Stress (prolonged)
- Malformation of knee cartilage along with joint pains
- Abdominal pain

COMPLEMENTARY TESTS

- Liver function test
- Lead in blood
- Vitamins in blood (esp. vit. B6):
- Elements in blood (esp zinc)

LITERATURE

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