Cryptopyrroluria
The most common unrecognised metabolic anomaly

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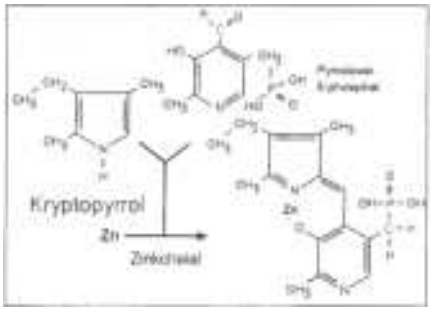
Introduction

Although over 12% (!) of Germans suffer from this genetically determined metabolic anomaly, it remains relatively unknown in Germany.

Cryptopyrroluria is one of the few illnesses which also offers its victims an advantage, and that is high intelligence; however, in stressful situations this can turn out to be a handicap.

Albert Einstein, Charles Dickens and Charles Darwin have been described as prominent pyrrolics.

Cryptopyrroluria was discovered around 1960 by Carl C. Pfeiffer, the pioneer of Orthomolecular Therapy, who was also the founding director of the largest orthomolecular clinic in New Jersey, USA. A zinc deficiency had already been found to be common to both schizophrenics and depressives, and he was looking for a substance which might occur in the urine of both of these. Since he found that chromatographically the mauve bands showed positive, this disease is still frequently referred to in the USA as 'mauve factor', rather than Cryptopyrroluria (CPU).
Cryptopyrrol (2,4 dimethyl-3-ethyl-pyrrol) is a building block of haeme metabolism, which unfortunately binds (chelates) zinc and Vitamin B6, thus depriving the body of both these important building materials. In a healthy person, small quantities of this metabolic product are excreted in bile pigment via the stools. A pyrrolic excretes it in quite large quantities via the urine ("concealed", from the Greek "krypta", hence the name). Pyrroluria is one of the porphyrias.



[Fig. 1: The bond of Pyridoxal-5-phosphate and Zinc with Cryptopyrrol (according to Pfeiffer)]

Among the illnesses listed below, we find the highest proportion of pyrrolics, e.g. hyperactive children (80%), schizophrenics (80%), cancer (over 50%), MS and allergies (80%), and also in liver disease. The zinc and Vitamin B6 binding explains why children with ADHD also frequently show other affections such as allergies and hyperkinetic syndrome.

- Weakened immunity/allergy
- Acne/eczema/slow wound healing/herpes
- Schizophrenia/psychoses
- "Burn-out syndrome"
- PMS
- Dyslexia/learning difficulties
- Hyperactivity (ADHD/ADD) 80%
- MS (70%)
- All glutathion deficiency diseases
- Cancer (50%)

Table 1: Diseases occurring frequently in pyrroluria

Zinc deficiency

Zinc is a building block for over 250 enzymes. Typical symptoms of zinc deficiency (see Table 2) include problems of hair and skin, and signs of weakened immunity, such as allergies and viral diseases, since zinc has an anti-viral action and shares responsibility for the maturing of T-lymphocytes and production of interleukin 2, which activates the natural killer cells and B-lymphocytes.

In severe zinc deficiency, we see the typical white patches or horizontal ridges on the finger-nails; these often do not disappear until zinc supplementation has been taken for 4-5 months.

In casetaking, it is diagnostically important to ask how the patient tolerates alcohol. Pyrrolics feel "tipsy" even after small quantities, since zinc is a building block of alcoholdehydrogenase, which also initiates the conversion of retinol into retinal. Poor adaptation to night vision can therefore likewise be an indicator of zinc deficiency.

The depressed capability of the body to detoxify itself is also particularly noticeable.

Since zinc is also responsible for the elimination of heavy metals (lead, cadmium), pyrrolic children accumulate particularly large amounts of heavy metals in their bodies. This can give rise to a deficiency of glutathion, with all that that implies (allergic tendency, weakened immunity, elevated risk of cancer, diminished cell respiration).

- Weakened immunity/susceptibility to infections, esp. viral (T-cell differentiation and reduced secretion of interleukin 2, lymphopaenia)
- Allergies (Type IgG, from quinoline deficiency)
- Leuconychia
- Loss or premature greying of hair
- Pale skin/intolerance of sunlight
- Acne
- Oligospermia
- Disorders of detoxification, esp. of heavy metals (lead, cadmium, etc.)

Table 2: Symptoms of zinc deficiency

Vitamin B6 deficiency
A deficiency of Vitamin B6 (see Table 3) in pyrrolics results in dangerous deficiencies of trace elements, on account of a lack of picolinic acid, and in particular:

- Zinc deficiency (see above)

- Manganese deficiency (manganese is particularly important for the synthesis of cartilage; its absence for more than six weeks can be enough to damage cartilage)

- Chromium deficiency (chromium is a constituent of glucose tolerance factor and is therefore of equal importance for both diabetics and hypoglycaemics)

- Magnesium deficiency (magnesium controls over 300 enzymes) in pyrrolics increases the risk of cardiac circulation problems, and a shortage of it reinforces hyperkinetic syndrome ("fidgety Phil.").

In pyrroluria the active form of Vitamin B6 (Pyroxidal-5-phosphate) is bonded. For its conversion, this requires Vitamin B2 and especially zinc. It plays a part in numerous metabolic processes, particularly in amino-acid metabolism and regulation of the blood-sugar level.
Reduced gluconeogenesis due to Vitamin B6 deficiency can result in ravenous hunger for sweet foods, which are contra-indicated. Pyrrolics are frequently lacking in manganese and chromium (thyroid beware!). Furthermore metabolism of refined carbohydrates uses up manganese and increased quantities of chromium are excreted via the kidneys. Thus , there is a double deficiency, which exacerbates the low sugar problem.

- Shortage of zinc, manganese, chromium and magnesium
- Alcohol intolerance
- Weak liver/disorders of detoxification/anaemia
- Low serotonin level (headaches, morning sickness, low blood pressure, cold feet, depression, amenorrhoea
- Imbalance between omega-3 fatty acids and omega-6 fatty acids
- Insufficient formation of niacin from tryptophan
- Homocysteinaemia
- Inability to cope with stress
- Poor short-term memory (repeats questions frequently)
- Extremely good long-term memory (highly gifted)
- High level of creativity with analogous ability to think

Table 3: Symptoms of Vitamin B6 deficiency

Because of their Vitamin B6 deficiency, the serotonin level in pyrrolics is too low, with unpleasant consequences, such as depression, headaches and PMS.

Since Vitamin B6 is responsible for the functioning of the ultra-short-term memory, pyrrolics may be recognised by their frequent repetition of questions, usually within 10 seconds, if they think that they have not understood something. As it is important for them to have the information immediately, they frequently interrupt the person to whom they are talking, lest they run the risk of forgetting the question.

This brings us to the unusual advantage offered by this illness:

Since pyrrolics, because of their poor short-term memory, are scarcely able to register facts, they integrate all information rapidly, thus attaining an excellent long-term memory. Because they are constantly constructing mnemonics and the like, they are capable of erecting high analogue thought-structures (e.g. Darwin and Einstein, who were well-known for their white-spotted nails and muddle-headedness). In areas, in which they are deeply interested (science) they attain mammoth achievements. This is why pyrrolic children frequently impress us, coming across as highly gifted in certain areas, whilst experiencing tremendous difficulty in learning vocabulary, or possibly even being dyslexic.

What can be a problem for families and teachers is the forgetfulness attendant on the poor ultra-short-term memory and the inability of pyrrolics to keep their things in order, so that there is a constant search for things that have been mislaid (child's room in chaos).

A helpful diagnostic question is: "Are you frequently hunting for your car-keys?" or "Are you good at taking note of directions to places, or the names of people to whom you have been introduced?"

Their poor ultra-short-term memory places children under heavy mental pressure when it comes to learning. Because of their Vitamin B6 deficiency, they have less serotonin and are highly susceptible to stress. Therefore, when they are stressed, tasks requiring a high degree of co-ordination (packing a suitcase, preparing for an exam, a house full of children) result in pyrrolics being totally over-stretched.

Nowadays, however, even non-pyrrolics may exhibit the above-mentioned symptoms, since higher demands are being made on our resources not only of zinc (heavy metals in large amounts) but also of Vitamin B6 (environmental toxins and high levels of stress). Treatment consists in avoidance of so-called Vitamin B6 predators, such as glutamate and processed fruits. Because of the increase in air traffic, more and more hydrazines are being released, and these use up Vitamin B6 in the soil (see Table 4).

- Maturation inhibitors applied to fruits (esp. peaches, tomatoes)
- Insecticides and preservatives
- Fuel additives to aviation spirit (hydrazine)
- Glutamate (sausage, bakery goods, flavour enhancer)
- Alcohol
- Aldehyde (Formaldehyde, perfumes)

Table 4: Formative factors in Vitamin B6 deficiency

- Stress (Vitamin B6 is a building block of Serotonin)
- Microwaved food
- Detergents (Pril, Palmolive)
- Toothpaste with added fluoride
- Sunscreen creams
- Radiation from mobile and cordless phones
- Toxic pollution, such as
  - Heavy metals
  - Preservatives
  - PCB
  - Glutamate (flavour enhancer, commercially produced sausage and bakery goods)
- Pollutants that weaken the immune system, e.g.
  - Immunisations
  - Antibiotics

Table 5: What hyperactive children must avoid

Emotional and occupational stress in particular are to be avoided, as well as mobile phone pollution (high level of radical formation, which further drains the already depleted glutathion reserves) (see Table 5). It is important to curtail the consumption of sugar and phosphates, since pyrrolics have problems breaking down protein in the gut.

People who excrete a high level of indican in the urine are almost always pyrrolics, as they exhibit an intestinal dysbiosis (often putrid dyspepsia, with a typical odour of indol). Good laboratories (e.g. Orthomedis Laboratory, Switzerland; www.orthomedis.ch) demonstrate the presence of indican in the urine of pyrrolics as an indicator of decaying protein. Special dark sample tubes are necessary for sending, and no vitamin supplements should be taken two days before drawing a sample.

Treatment

Where the cryptopyrrol levels are high (normal is <15mg/100ml.) and tests for indican are positive, colon cleansing should be made a priority. For this purpose, FORTAKEHL 4X

Regulation of pH levels:	ALKALA N powder, SANUVIS and CITROKEHL
Colon cleansing:	FORTAKEHL In cases of mycosis EXMYKEHL and SANUKEHL Cand 6X Laktobakterien, etc.
Improvement of circulation and protein breakdown:	MUCOKEHL / NIGERSAN or SANKOMBI
Immunomodulation:	UTILIN “H“ or UTILIN “S“, and SANUKEHL preparations
Dietary adjustment:	Plenty of Omega-3 fatty acids (LIPISCOR) Small quantities of high-valency amino-acids Small quantities of phophates
Injections:	ZINKOKEHL and VITAMIN B complex
Long-term teatment:	Mornings: 50-100mg Vit. B6 - until dreams are recalled. Evening: 1 x Krypto-Komplex plus (by Tremedici)

Table 6: Suggested treatment plan for Cryptopyrroluria patients

capsules and ALKALA N powder should be prescribed in the morning, to regulate the acid-alkaline balance. In cases of fungal infestation, these should be preceded by ALBICANSAN or EXMYKEHL 3X suppositories, combined with SANUKEHL Cand 6X drops.

To continue with isopathic treatment, the remedy of choice is MUCOKEHL 4X capsules; this will optimise the micro-circulation (because of the lack of serotonin, pyrrolics often have cold hands and feet) and improve the breakdown of protein. For children with allergic tendencies, a better alternative is SANKOMBI 5X drops. On account of poor lymphocyte differentiation, recommended remedies for immunomodulation are UTILIN "H" or UTILIN "S".

For therapeutic reasons, pyrrolics should continue to take Vitamin B6 and zinc, along with appropriate trace elements, in some cases for life. The morning dose of B6 should be adjusted daily on an individual basis - (this must only be taken in the mornings, as it can lead to high spirits and could prevent children from sleeping!). In the space of a few hours this enables many children to attain improved concentration, and they feel better right away as serenity descends on them again (owing to serotonin synthesis).

These high doses of Vitamin B6 continue until the patient is once more able to recall his dreams. Since dreams have to be stored away in the short-term memory immediately, which is precisely where a pyrrolic is deficient, these patients claim that they rarely dream. The dosage of Vitamin B6 should be raised significantly higher during periods of stress (exams, stressful times at school) than in the holidays. Up to several mg. daily of plain Vitamin B6 can be given. Unsuitably high daily doses of Vitamin B6 may result in L-dopa becoming depleted and, for this reason, it is absolutely necessary to tailor the dose to the individual.

In the evenings the patient should be given a predetermined mixture of zinc gluconate, the remainder of the Vitamin B complex, manganese, chromium, magnesium, calcium and, if possible, Vitamin D3 and selenium, to support the detoxification of the body (e.g. Krypto-Komplex plus, by Tremedici, tremedici@t-online.de, Tel. +49-7685-91 36 57).

Zinc should only be given in combination with manganese, since long-term doses of zinc can deplete the already low remaining level of manganese. As this illness is genetically predetermined, this deficiency must be balanced for life in an orthomolecular fashion.

Thus there is no room for the much-mentioned co-existence of genius and madness. A state of balance between creativity and high intelligence is attainable, with weakened immunity and detoxificatory incompetence being well compensated.

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