Iron Deficiency Depression

A Multicentre Investigation

Dr. med. Beat Schaub

Institute for Patient-Oriented Research (IPF) / Iron Clinic
Bottmingerstrasse 50, CH-4102 Binningen / Basel
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Summary

The first report of an iron deficiency syndrome without anaemia (IDS) was published in 2006. Only one year later it was possible to confirm the existence of this syndrome on the basis of multicentre data. This means that it is now proven that iron deficiency can not only cause anaemia (iron deficiency anaemia (IDA)) but can also compromise health and wellbeing years before the development of overt anaemia. Because the signs and symptoms in question are difficult or in most cases impossible to detect with objective research methods they could not be recognized at all using the conventional scientific methods based solely on objective criteria.

The iron deficiency syndrome IDS thus owes its discovery to a new research approach – patient oriented research as an extension of the hitherto narrow scientific method. Patient oriented research takes into account subjective criteria in addition to the objective criteria used in conventional science. Only then does it become possible to correlate objective and subjective criteria. This is where the interface lies. If the treatment of a deficiency state in the body causes a symptom to disappear we can assume with a high degree of probability that the previous deficiency was responsible for or at least contributed to the impaired state of health and wellbeing.

This approach enabled us to define the nine cardinal symptoms of IDS listed below – symptoms which afflict many patients and are often the reason for going to the doctor.

<table>
<thead>
<tr>
<th>Symptoms of the iron deficiency syndrome IDS</th>
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<tbody>
<tr>
<td>• Fatigue</td>
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<tr>
<td>• Difficulty concentrating</td>
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<tr>
<td>• Depressed mood</td>
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<tr>
<td>• Sleep disturbances</td>
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<tr>
<td>• Dizziness</td>
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<tr>
<td>• Tense neck muscles</td>
</tr>
<tr>
<td>• Headaches</td>
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<tr>
<td>• Hair loss</td>
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<td>• Brittle nails</td>
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In the case of IDS the situation is as follows: A person who suffers from one or more of these symptoms and at the same time has an iron deficiency has a good chance of experiencing sustained improvement or even cure through rapid intravenous replenishment of the iron stores.

This publication looks at a symptom which can be caused by iron deficiency: depression.

As used in our part of the world, the word depression can sound rather harsh, as well as being stigmatising. Often various facets such as the following would be more appropriate: depressed mood, emotionally unstable, prone to tears, hypersensitive, weak nerves, listlessness, lethargy, hopelessness etc. Nevertheless, academic medicine still tries to produce definitions which are of no help to either doctor or patient. In particular, the word does not contain any implied connection to a really tangible cause. In each of the above-mentioned states it is usually clear to the doctor that the underlying disorder is depression. After all, this is what he has learnt. So the patient is suffering from depression. And this diagnosis, i.e. the symptom, is thus artificially shifted in the direction of a cause. Because the patient is depressed he feels emotionally unstable. Because he is depressed he is hypersensitive. Because he is depressed he is lethargic.

So it is not surprising that doctors diagnose some people as having depression even though they don’t feel depressed at all.
In the absence of alternatives the doctor now picks up his prescription pad and prescribes an antidepressant. He may even be convinced that he is treating the cause. After all, this was what he was taught at university.

**But: Why does a person become depressed?**

Everyone understands why a person becomes depressed if he experiences constant bullying at work or if his partner dies. In such a case we have so-called:

- reactive depression or
- exhaustion depression

Exhaustion depression develops if there is insufficient response to reactive depression. A person who does not change his life and continues to allow himself to be exposed to unremitting pathogenic influences will eventually become exhausted.

**But what if there is no identifiable underlying cause?**

In such a case the imagination knows no bounds. Potential diagnoses proliferate and are readjusted a little every few years. In recent years, for example, German-speaking countries have decided to use the English terms to replace diagnoses which did not mean anything anyway (such as ‘endogenous depression’). Maybe this sounds more impressive or even gives doctors the feeling that the cause has now really been found. ‘Major depression’ is a typical example.

A list of the different types of depression taken from modern text books for doctors includes the following:

- Endogenous depression
- Neurotic depression
- Manic depressive disorder
- Depressive episode
- Major depression

Now that it has been established without doubt that iron deficiency can make people depressed and that this depression can disappear in response to iron infusions, we have for the first time a clear, easily detectable and treatable cause of depression which we can at last call by its real name: namely iron deficiency. Accordingly, the depression it causes can also be called by its true name:

- Iron Deficiency Depression.

Academic pharmaceutical research has recognized that a serotonin deficiency can cause depression. The invention of the pharmacological class of the serotonin reuptake inhibitors was a blessing for many depressed people. The tablets optimise the relative saturation with serotonin through a special mechanism.

**Treatment approach for depression**

*Serotonin is a hormone.*

Hormone production is always an iron-dependent body function. Therefore, if the body has too little iron it is often unable to perform these iron-dependent functions properly.

So it appears that iron deficiency also impairs serotonin production.

It is hardly surprising that a lack of serotonin (happy hormone) leads to depressed moods. Consequently, if we want to cure the depression, we need to correct the serotonin deficiency.

Up to now there has been only one method available for this: regular use of antidepressant drugs. Since the discovery of iron deficiency depression (IDD) we now have a second method available: rapid intravenous replenishment of the iron stores. This procedure appears to ‘restart’ the iron dependent body function of hormone production ‘from within’ as in the majority of patients who were treated in this way the depression either improved substantially or even disappeared altogether. This can only mean that the serotonin level was corrected. This conclusion is the product of logical thinking. However, to date there have been no objective scientific studies of the problem. The patients and doctors of the new generation have to make the choice themselves. Do they want to fight the depression by taking
drugs every day or do they want to go for a causal treatment? In the age of increasingly informed and emancipated patients the decision should be made by both parties together. The patient and doctor should decide together which method they want to use in the first instance (first-line therapy).

**Methods**

In 272 patients from 17 Iron Clinics the laboratory values and subjective state of health before and two weeks after rapid replenishment of the iron stores with iron infusions were documented and correlated with each other.

The multicentre data were documented centrally in the internet health banking data base (h-banking). Health banking fulfils two purposes: online calculation of the number of iron infusions required and at the same time quality control through the documented treatment courses: calculation of the success rates and cost-to-benefit ratios.

**Epidemiology**

242 of these 272 patients (57%) suffered from depression. These were women of menstruating age.

**Diagnostic procedure**

The diagnosis can only be confirmed after rapid replenishment of the iron stores with iron infusions. First we must have a basis for deciding whether this treatment is indicated. The decision is based on a reliable suspected diagnosis and measurement of a low ferritin value.

**Treatment**

Provided it is performed by a specialist, the treatment has a rapid and lasting effect and is also safe. The art is learning how to find out who needs how much iron in what period of time in order not to have an iron deficiency. So the treating doctors are dependent on new knowledge which they were not taught at university. The diagnosis and therapy of the documented treatment courses follows the strategy of Advanced IDS management or AIM.

The treatment is the same as for the iron deficiency syndrome IDS.

**Results**

The results are surprising. Using two different interpretation patterns, the success rate is between 68 and 84%.

![Graphs showing successful and unsuccessful treatments.]

The top graph is based on more stringent criteria. Only patients who became symptom free or showed marked improvement are classed as ‘successfully treated’ (68%). The bottom graph uses the less demanding criteria usual in the profession. In this case patients who only derived a small benefit from the treatment (16%) are also included in the successful group (84%).

**Discussion**

In both cases there is no doubt: the results are so surprising that it is time for further investigations on the subject of iron deficiency depression, if possible also scientific studies.
The results presented in this publication are based on data from 17 Iron Clinics and are largely in line with the initial data obtained in a monocentre study conducted in a GP practice (publication in Ars Medici in 2006).

And if the realities presented so far are confirmed by subsequent studies no one should try to stop us any longer from including the term iron deficiency depression in medical vocabulary.

**So our new guiding principle will be:**

What a depressed person with iron deficiency needs in the first instance is iron. And he needs it quickly. Such a procedure is safe and highly effective. For these patients rapid intravenous replenishment of the iron stores by means of iron infusions is the first-line therapy. After all, the chance that the patient will benefit from this treatment is well over 50%.

It is like with plants. If a plant has yellow leaves and its soil is dry what it needs first of all is water. No one would dream of questioning that watering is the ‘first-line therapy’.

**Literature**

For our description of the perspective of conventional medicine we consulted two textbooks:

**Definitions of psychiatric disorders in conventional medicine:**

- Volker Faust, Gustav Fischer Verlag, 1995
- Mathias Berger, Urban Fischer Verlag, 2nd Edition 2004

**Text book of 1995: Volker Faust**

‘Depression is an affective disorder with three different causes:

- reactive
- endogenous
- organic.

This affective disorder can be accompanied by psychological, psychomotor and vegetative-somatic symptoms.’

The truth as seen in those days could be expressed briefly and concisely. If the patient is found to have neither reactive nor organic depression this only leaves endogenous depression, depression that comes ‘from within’. Depression as symptom and diagnosis likewise becomes the cause.

This also explains why we have seen increasing consumption of antidepressants in recent years.

Nine years later views have changed. People have come to the conclusion that they were mistaken. To reflect the fact that the causes are not yet known it was agreed that the new definitions should use a modest descriptive vocabulary.

**Text book of 2004: Mathias Berger**

Today we speak practically only of depressive episodes of various severity or of major depression.

‘With regard to depression we are not yet able to distinguish different nosological entities on the basis of specific aetiologies, pathophysiology, courses and treatment effects. Rather, the only scientifically justifiable method available to us today is to define different forms of depression on the basis of the categories symptomatology, severity, duration of illness and risk of relapse and this is the path that was followed for the new classification systems.

This means simply that, for the first time in the history of medicine, hitherto implicit aetiopathogenetic models in the diagnosis and classification of depression such as endogenous, neurotic, autonomic etc. have been abandoned in favour of a more precise description of the disease in question in cross section and longitudinally. Terms such as ‘endogenous’ or ‘neurotic’ implied aetiopathogenetic concepts which differed between different countries, schools and hospitals and could
not be confirmed by empirical studies. Therefore, abandoning these terms is the prerequisite for international comparability of the classifications and diagnostic procedures. This is tantamount to an admission that knowledge about the aetiology of affective disorders is still limited. The existing classification systems can therefore only be regarded as provisional.

Currently depression is classed as a mood disorder in the USA and as an affective disorder in other countries.

Comments

Today, now that the decade long tour de force has at last been decided in favour of reason and the neurotic subcategorisation of depression has been abandoned, the way is open for a new approach. As Mathias Berger aptly writes, only the exact documentation of treatment courses can give us information about possible connections (documentation of the disease in question in cross section and longitudinally). And it is precisely this that is the duty, and also the strength, of patient-oriented research.

H-banking, which was established in 2004, meets this aim. Through the centralised digital documentation of treatment courses in cross section and longitudinally with documentation of objective and subjective data we were able – thanks to digital correlation – to discover the iron deficiency syndrome IDS and thus also iron deficiency depression. As the results are so unambiguous and have been confirmed by a multicentre follow-up study it is possible for the first time to define a type of depression in which the cause is implicit in the diagnosis: Iron Deficiency Depression.

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