

WHY WE PREFER „EPH – GESTOSIS“

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In 1965, the Director of the University Maternity Hospital in Basel, Switzerland suggested to us the topic of nomenclature of what then was called in central Europe

Nephropathia.

A discussion in the then renowned journal *Gynaecologia* was started with contributors from Europe, America, Africa and Near East. These contributions were leading to the congress dedicated to the syndrome EPH – Gestosis in
1969

Nomenclature

To name a thing, an idea, a condition is very important since it also defines it, gives it a face, a meaning. It also enables us to put it in relation to other definitions. Lacking agreements on a name opens many ways to misunderstanding and confusion.

We have to realize too, that the pregnancy complication we are discussing is not one single nosological entity only. We all agree that Edema Proteinuria and Hypertension are the cardinal signs and symptoms. But even here the disagreement has started already. Because the retention of water has been assessed as beneficial and desirable and indicative for a healthy mother and a big and healthy child by certain scientists in some restricted areas of Europe.

Let us be careful though because each one of these three cardinal signs and symptoms might appear independently from each other and may have a multitude of origins. The pregnancy complication we are talking about has to be considered as a syndrome. It has a great number of names. We have collected a small part of them from the English and German literature and we have counted over 150 different names. And each of them has its own assumption and means something else.

We might want to discuss those nomenclatures and discard what has been rejected, what gives false associations, faulty ideas concerning etiology, prognosis or therapy. .

Toxemia, Toxicosis is the first name we want to discard. Never a toxic substance has been found responsible for the signs and symptoms in all cases of EPH – Gestosis. It is actually a wrong name.

The next name is Preeclampsia. This is a very dangerous name because First It means in the European literature something entirely different than in Anglo-American publications. We talk about pre-eclampsia when we mean the clearly defined condition immediately before the eclamptic seizure with headaches, visual disturbances with upper abdominal pain simulating gastric perforation, with hyperreflexia, acute water retention,.

heavy proteinuria and oliguria up to anuria. In the Anglo-American papers all cases with elevated blood pressure are included in the term preeclampsia.

Second. These facts give rise to misunderstanding and missinterpretation of figures, statistics and results of treatment. In America the term preeclampsia has been declared as misspelled and suggested to be abandoned. Let us do the same.

We want to discuss now the names containing „Hypertension“.

Hypertension first of all may have quite a number of causes. What we measure is most of the time of unknown origin. It we measure correctly, that is.

But let us look at the pitfalls which hamper our path to correct blood pressure reading. This reading depends on the condition of the patient, on the physical and emotional status of the person taking the blood pressure, on the technic employed and on the blood pressure machine available. Several technical factors have to be mentioned, each of which may produce a different result. From this point of view the significance of hypertension has been considerably overestimated.

But there is another very important argument

EPH – Gestosis is mainly the complication of the underprivileged, the poor, the uneducated, the people of the developing countries. It might be an extreme luxury to have a blood pressure apparatus available and more so to have a person present who is instructed how to take the reading. The most important sign for the vast majority of women with EPH – Gestosis is edema indicating to her that she and her pregnancy might be in danger. If we take hypertension as the main and most important name for this, their most frequent pregnancy complication we actually use a nomenclature which is incomprehensible to those who need our help, our research, teaching, therapeutic suggestions most badly. We think therefore that it is wise to drop „hypertension“ altogether from the list of the acceptable names.

There are a number of unusual, clumsy and for general use impossible names like

Trophoblastic nephrovasculopathy

Choriogenic nephropathy

Vascular chorionic nephrosis

We want to drop those too and we think everybody agrees with this decision

Nephropathy means a diseased kidney. The term was introduced by the famous German nephrologist Volhard, who compared the signs and symptoms of a pregnant woman with his patients in the clinic for internal medicine. It does happen that a kidney disease is the cause for EPH – Gestosis. But in most of the cases no renal damage can be found on post partum examinations. We performed such investigations in over 400 patients. The name Nephropathy therefore covers only a small part of the whole number of cases. We want therefore to eliminate this name too.

That leaves us just a very few names. It is first of all

Eclampsia, which we call convulsive Eclampsia (EC), easily to be diagnosed by the dramatic event of fits and seizures.

Impending or Imminent Eclampsia similarly is easy to be identified and an extremely important condition to be diagnosed and treated immediately.

So we arrive finally at the term Gestosis, which is the correct name. It is a pregnancy,

a Gestation

Gest....

which is complicated

.....osis
similarly to Nephro-osis
Arthro-osis
Neuro-osis

and the means to identify this pathological development of the pregnancy are the cardinal signs and symptoms, i.e

Edema	E
Proteinuria.	P
Hypertension	H

and therefore we call it EPH – Gestosis

This name does not imply anything, nothing concerning causes, prognosis or therapy. It is just the description of what we see:

A pregnancy complicated by
Edema
and/or Proteinuria
and/or Hypertension,

i.e.

a high risk pregnancy

This is a name we all can accept and work with

We decided to apply the cardinal signs and symptoms in the Sensible Classification, simple, easy to establish by anybody who is able to demonstrate Edema, prove Proteinuria and take the Blood Pressure. We have to define though, when signs and symptoms turn pathological. We use the most simple methods also because these names, classifications and definitions should be applied by those people who care for pregnant women under the most difficult conditions.

Let us mention that harmful effects on the baby and on the mother may occur without our being able to prove E, P and/or H.

With these definitions we are able to establish the Gestosis Index (GI) which gives us, similar to the Apgar Score some ideas about the development of the complication and the success of our treatment.

It is very obvious that we should try to find an adequate, causal treatment of this syndrome EPH – Gestosis when ever possible. The better, the more sophisticated, the more exactly aimed our treatment will be, the less bad effects on mother and baby EPH – Gestosis will have. The more drops mortality rate for mother and child. We might be able by our investigations to find the causes of EPH – Gestosis, and when you remember the many causes of Hypertension which we illustrated before and when you look at the list of possible causes for Proteinuria you know how difficult a task it is to come to a correct diagnosis of

EPH – Gestosis and not only of its signs and symptoms. We all know from experience, from literature that prophylaxis of EPH – Gestosis is not only possible but also mandatory. It reduces the number of cases and turns the more severe to lighter conditions, which can be managed without danger to mother and child.

The care for the pregnant woman must start early with premarital counselling, advising future mothers and fathers as to how conduct their life, what investigations to be carried out, whom to consult for special advise.

Before the intended pregnancy. the mother-to-be should be examined thoroughly and treated if necessary. I may mention unknown essential hypertension, pyelonephritis, thyroid condition, latent diabetes etc.

Early detection prevents the cases turning into high risk pregnancies.

Adequate guidance throughout pregnancy, close-knit check-ups. monitoring of mother and child, detension from work, bedrest temporary or may be premanent, admission to the hospital might help to avoid complications.

Investigations post partum, impossible to be carried out during pregnancy like X-ray, Isotope exams lead often to the diagnosis of the underlying or preexisting disease. Thus we will be able to treat the cause of EPH – Gestosis before the next pregnancy occurs.

So we have built up a system of diagnosing and preventing, of assessing and treating EPH – Gestosis which might help to improve the health and future for mother and child.

The Organisation Gestosis, Society for the Study of Pathophysiology of Pregnancy has dedicated its efforts to this worthy cause.

We, the OG now needed a pathogenetic classification of the

Syndrome EPH – Gestosis

i.e. a Final Classification.

It is an excellent thing to pick up early the signs and symptoms of EPH – Gestosis and treat the syndrome as to reduce maternal and fetal suffering.

It is absolutely necessary to register all cases showing E, P, and/or H and investigate the epidemiological aspects to be armed against surprises.

But one step further would be better, i.e. prevent EPH – Gestosis altogether. Though it ,might mean more work, also to spend more money, it would be tremendously satisfying and extremely economical.

We have computed that society has to spend a very large amount of money in desolate cases of EPH – Gestosis. Let us assume that a mother with EPH- Gestosis gives birth to a child so severely damaged by this most frequent pregnancy complication(a world wide 10 % of all pregnant women) that this individual never will be able to care for himself, to earn his own living, but

always is dependent on other persons. This assumption is not merely a nightmare but occurs every day.

Let us further assume that this patient lives to the age of 60 years. The government, the department of health, education and welfare will have to take care of him, provide special schooling, classes for handicapped children, has to look for some place for him to stay until he dies.

In those 60 years the government has to spend about \$ 500.000 for him. And since he is not able to earn money he does not pay any income tax. So the department of internal revenue and taxes loses again about \$ 500.000.

If you multiply this added sum with the number of disabled children because of EPH – Gestosis you get a fantastic figure. Money which could be used effectively to prevent just this damaging EPH – Gestosis. Because a large part of this syndrome can be prevented.

To prevent we have to know why EPH - Gestosis occurs. For that we must investigate thoroughly all cases of EPH - Gestosis. We will pick up this way all patients who suffer from a preexisting disease on which EPH – Gestosis is superimposed. This way we form a first group, the one of superimposed EPH – Gestosis.

(2.1. superimposed EPH – Gestosis)

„Preexisting disease“ most frequently concerns the cardio-vascular and so it will be the first subgroup.

(2.1.1. preexisting cardio-vascular disease)

This subgroup will be followed by preexisting renal disease

(2.1.2. preexisting renal disease)

This list can be enlarged according to the findings of the more exact postpartum examinations.

We can state now that more and more subgroups can be established depending upon the large knowledge of influence of the preexisting diseases upon pregnancy and available investigative techniques. It is to be expected that the following group, the group of 2.2. transient, essential Gestosis becomes progressively smaller

(2.2. transient, essential Gestosis)

It contains the cases where no signs and symptoms after puerperium, i.e. two to three months after delivery can be found, where careful and sophisticated investigations do not reveal a preexisting disease, damage of any organ system or malfunctioning organs.

We have to accept that EPH – Gestosis indicates that organs, organ systems have been overtaxed by pregnancy. All those organs might function properly though may be only just compensated. Pregnancy might throw a delicate equilibrium out of balance. The body shows to us that he is not able to cope with the additional load. He has only a very few means to indicate a multitude of different pathological changes in his functions. Those monosymptomatic or polysymptomatic cases urge us to seek the cause/causes for its appearance. The more exact and sophisticated our methods of investigations are the more we detect the smaller remains the number of cases listed under the heading „essential or transient EPH-Gestosis“

With this we have covered the larger majority of all cases. Of course there are those rare patients who have a concomitant disease

(2.3 concomitant disease)

which develops besides pregnancy and which does not have any connection with or influence upon pregnancy

2.3.1. includes a disease which does not change during pregnancy but shows E and/or P and/or H

(2.3.1. E., P, H independent of pregnancy)

2.3.2. means diseases which are present simultaneously with EPH – Gestosis. However not presenting themselves with EPH signs and symptoms

(2.3.2. simultaneous disease)

Finally there are always cases which we cannot track down because we lost the patient, be it also because they refuse investigation or because the hospital, the institution lacks the proper infrastructure, laboratory equipment, the trained personnel, the financial background or the doctors to investigate. We list them under the heading 2.4. unclassified EPH-Gestosis

(2.4. unclassified EPH – Gestosis)

If we add up all cases listed in this pathogenetic classification we reach the same sum as with the symptomatic classification. The figure under „unclassified EPH - Gestosis“ indicates the efforts and possibilities of the investigating obstetrical center. This figure actually is a measure of the efficiency of the obstetrics applied.

Of course it would be the ambition of every clinic to lower this last number as much as possible. This is to do through conscientious post partum investigation. With this we get more exact and detailed insight into the pathophysiology of pregnancy, into the pathophysiological mechanism of the syndrome EPH – Gestosis. We are able to pick up those cases who can be treated in the pregnancy-free interval to prepare the woman in her best possible condition for her new pregnancy. We actually are able to prevent EPH – Gestosis. If we cannot treat the patients we at least can aim very directly at her shortcomings, preventing again by adequate measures EPH – Gestosis to appear.

If our measures fail we at least have included her in the group of the high risk pregnancies and such are not completely caught by surprise when EPH – Gestosis should occur.

So the pathogenetic classification is the final classification. We use those 2 kinds similarly to the classifications on genital cancer

1. to pick up cancer, stage it according to the clinical findings
2. to classify it again after obtaining all possible results including histological reports for final definite staging

This system has proved to be very beneficial for research as well as for prophylaxes and treatments. We suggest to do the same for EPH – GESTOSIS

The system we devised covers all cases of EPH – Gestosis from the first recognition of its signs and symptoms to the final diagnosis and the causal specific treatment and with it to the prophylaxis as well. If used correctly we have taken a big step ahead in the fight for a happy family.

Zagreb, May 20th 2005.