An interview with Associate Professor Pavel Calda, M.D., PhD., Head of the Ultrasound Unit and Centre of Fetal Medicine of the Obstetrics and Gynaecology Clinics of the 1st Medical School, Charles University and General Faculty Hospital in Prague

A Period of 10–13 Weeks is Crucial for a Pregnancy

Associate Professor Pavel Calda, M.D., PhD. (1957) is a gynaecologist and obstetrician, a leading expert in the field of perinatology and ultrasound diagnostics. He graduated from the Medical School of Charles University. In addition to further post-graduate studies, he completed internships at Westfälische Universität in Münster, Germany, and at the Florida Institute for Fetal Diagnosis and Therapy, Tampa, Florida, USA. Under his leadership, the Ultrasound Unit and the Centre of Fetal Medicine carries on 22.000 examinations and around 1.500 operations assisted by ultrasound per year. He is a member of the board of the prestigious International Society for Ultrasound in Obstetrics and Gynaecology (ISUOG) and a member of the International Advisory Board of the American Journal of Obstetrics and Gynaecology. He is President of the Czech Ultrasound Society, President of the Czech Fetal Medicine Society and a member of numerous other scientific bodies. He is an editor of the internet portal for professionals www.gynstart.cz, editor-in-chief of the Journal of Modern Gynaecology and a member of the editorial board of the Medical Science Monitor. He is an Associate Professor at the 1st Medical School, Charles University, an author of numerous academic publications and a holder of several scientific awards (Sonek Award for the best publication in obstetrics and gynaecology for the year 1999, Pawlik Award in obstetrics and gynaecology or the Liska Award of the Immunologic Society (1997) for a joint publication with a collective of authors).

Photo: Vladimír Weiss

What are the main tasks of your centre?

We deal with perinatology and ultrasound imagery methods and we are able to conduct operations during pregnancy on an unborn fetus. Our centre is probably the biggest and certainly the oldest in the Czech Republic. My teacher and role model was Professor Evzen Cech, whom I succeeded as leader of the centre. I believe we continue developing the area of neonatal medicine on the European and I would say even world level here. Our centre is also a university clinic, implementing research tasks as well as educating specialists. Personally, I am interested in everything from conception to a birth. Our aim is to take care of pregnant women and to assure that they give birth to a healthy child on schedule. Over the last 30 years, for the first time in human history, we have a unique possibility to follow what is happening during the different stages of pregnancy by ultrasound and recognize whether it is a normal or deviating development. If we recognize a known pathology, we can either start the treatment during the pregnancy or prepare the conditions for an invasive activity after the birth. Mother and child are properly taken care of at a well-equipped workplace. The state of the newborn child is no surprise to the staff.

From the technical equipment point of view, is your centre comparable with the top clinics abroad?

The job we are doing is definitely comparable. I had a chance to visit many clinics abroad and there are still some differences in the level of technical equipment. The Czech health care system is still underfinanced; an unclear organizational structure is prevailing and the conceptions are changing and varying constantly. That's not good.

You are implementing research tasks as well. Do you think research funding works better than the health care system financing?

To finance research is not easy in any system but there has been always a way to secure funding for research. At least we are always trying, and usually succeeding at the end. I don't want to be fundamentally critical of, nor admiring of, the system because it is in a process of change and development. There are visible efforts to change it for the better by promoting and supporting big and financially demanding projects. It is a good approach; acquiring large grants for big projects has always been problematic.

What is your current research dealing with?

We focus on detecting malformations during fetal development in early-stage pregnancy. This is real clinically applied research. Until recently, a basic ultrasound examination was not conducted until the middle of the pregnancy; now we are able to conduct complete ultrasound diagnostics of a fetus by the end of the first trimester. Simultaneously, the genetic testing is done so that we are able to check for chromosomal diseases. Thanks to developments in the IT sector we can accomplish all this at the end of 12–13 weeks of pregnancy, which is seven weeks earlier than was standard until recently. When women get pregnant now they should in fact immediately ask their gynaecologists to send them for this special examination. We are also looking at a serious gestational disease – preeclampsia (quick raise of a blood pressure, which, if untreated, results in convulsions but could also result in the death of a mother and her baby). Approximately two pregnant women in one hundred suffer from preeclampsia here. It seems we are going to be able to define signs that would call our attention to a possible outbreak of the disease and profile women with a high probability of suffering from preeclampsia as early as at the end of the first trimester. Then we will be able to provide them with special care. Another area we are specializing in is predicting the risks of a premature birth; a serious immaturity of a fetus usually means a premature birth and this phenomenon is a cause of 60% of newborn mortality. We are again looking for signs of a risk of a pre-mature birth. If we manage to detect the signs in due course and then eventually go on to prolong pregnancy, we could save lot of children who would otherwise die or face complications at the start of their lives.

A trend of "ageing mothers" is quite often being mentioned now. Because of different life-styles and career development some women are postponing pregnancy. How do you regard this trend?

The average age of mothers is rising in all developed countries but we are also living longer, in general. An important variable is that the period of studies and preparatory phase for a professional life is longer than in the past. Motherhood is still a woman's unique function and women naturally try not to be handicapped by that. If a woman wants to have the same chances as a man, it is a handicap for her to start a professional career after giving birth at 18 to 22 year of age and finishing her university degree afterwards. Although this would seem an optimal scenario no society has been able to solve this problem so far. A trend of postponing pregnancy truly exists. Unfortunately, the female biological constitution is programmed for a decrease in ovarian activity roughly after the 36th year of age – the process is sometimes slower, sometimes quicker but at around the 40th year of age a woman is not very fertile and the chance of getting pregnant is rather low. Otherwise age itself is not such a limiting factor; many women of higher ages are still fully physically fit. On the other hand, there is an increase in the incidence of Down syndrome and other chromosomal disease with maternal age; but these can be diagnosed early.

Nevertheless, some Czech specialists voice a strongly negative opinion on women who are giving birth in their thirties. What do you think of that?

It is not necessary to scare women by that. If somebody presents such an opinion I would say it is a somewhat sexist position. A woman should not suffer for being a woman and should have the same rights as man. A rich society should be able to support families with children and facilitate the same working conditions for mothers and fathers. This means creating a non-handicapping milieu and securing full-fledged child care. That does not yet occur here. It is automatically presupposed that a woman gives birth to a child and then takes care of him or her, and the man goes to work. That is an old-fashioned model. The wealth of a society should be expressed in the conditions the women and families are provided with in order to make child care and upbringing easier. Until now, in all developed societies and civilizations natality has been decreasing: the more developed a society the fewer children were born. That was also often a reason why a more advanced society was likely to be succeeded by a less advanced one but with a higher reproduction rate. Only a society that will be able to confront natality decrease and take care of that will reach a qualitatively different level.

If we look at medical issues in this discussion, for example the increase in the incidence of Down syndrome, and look at statistics and research, are there more cases of malformations and fetal diseases among older mothers?

No, the main issues we are facing now in obstetrics are those of premature births. Also the number of caesarean births is rising, which is a civilizational phenomenon and a problem in itself.

Why is it happening?

There are countries, like the U.S., where obstetricians face litigation very often. Usually, parents sue them over an unfavourable result of the child delivery: some handicap that a child suffers from is blamed on the way the birth was conducted. In many cases, any such cause-and-effect connection objectively is missing. If a caesarean birth is planned, any doubts about incorrect handling of a natural birth are out of the question. Very often, women plead for a caesarean birth. A motivation for a doctor might be also the fact that caesarean birth is an operation, which is better covered by the insurance companies than a regular birth. It is also possible to plan for it and for many obstetricians it is more comfortable. During a spontaneous birth, complications and injuries might occur, which will not occur when caesarean birth is performed. On the other hand, caesarean birth is an operation and a scar is left on the uterus. If a woman plans more than one or two pregnancies, the risks during subsequent pregnancies rise significantly after caesarean birth. This issue naturally is widely debated by the specialists and there are some clinics abroad where caesarean births represent more then 60 % of all deliveries. In the Czech Republic the number oscillates around 20 % but there are also clinics conducting over 30 % caesarean births. Unfortunately, it has been proved that there is no correlation between the rising number of caesarean births and lowering the incidence of perinatal mortality, i.e. that newborns would benefit from more frequently performed caesarean births.

Can a woman ask for a caesarean birth now?

Rather not, but for a concrete policy on this the head of the clinic is responsible. There is a big discussion on this issue now and the opinions differ. It is very complicated. In any case, the liberal attitude is on the rise, rather than vice versa.

What are the other problems of Czech obstetrics?

We have one of the lowest perinatal mortality rates in the world for infants. On the other hand we are struggling a bit with the number of women dying in connection to pregnancy and birth. In these statistics, we can find ourselves on the bottom of the list of the developed countries; in 2006; the number reached 16 mothers for 100.000 births. We know why it is happening. There are many smaller clinics where the level of care is eroding. The doctors are leaving for more interesting jobs. There are 100 maternal hospitals in the Czech Republic. In a country with a comparable number of births, like Sweden, the number there is half that. To provide intensive care demands team work that must be conducted with the same quality, 365 days a year, 24 hours a day. Wherever the births are occurring, intensive and complex care must be accessible. If it is not and a mother suffers from serious complications, her fate becomes rather a play of fortune. There are roughly 50–100 highly risky births in the Czech Republic per year and we usually succeed in saving the mothers only because they are taken care of in well-equipped and staffed clinics. The big issue in this sense is giving birth at home. A difference between giving birth at home and giving birth in an ill-equipped and staffed clinic is not very significant. The complications can occur suddenly and if a mother stays at home the chance of saving her life is truly low; if she gives birth in a clinic, it depends on the quality of the care she can be provided with.

What do you think about the re-emerging discussion on the interruption law initiated by KDU-CSL (Christian Democrats)?

KDU-ČSL represents Christians who have certain world views and attitudes. The supreme authority for a Roman Catholic Christian is a pope who proclaims certain dogmas. The Catholic Church by its nature refuses almost any regulation of reproduction. Since it is a faith, one can hardly dispute those principles because a faith is not based on rational reasoning. If one wants to discuss whether a policy is well or ill-set, it must not depend on faith but must be grounded instead on rational arguments. A faith should not be mirrored in the law. Law must be constructed for a whole society, not only for a minority of believers. It should apply to everyone and be liberal enough to allow for solving difficult life situation of both believers and atheists. In my opinion, the Czech Republic has one of the best interruption laws in the world and I am convinced it is not being abused. What is important and what such a law must contain is availability of tools for reproduction planning so that they are accessible and affordable to all strata of the society. At the moment, it does work in the Czech Republic. If a woman must solve her situation in such a way, access to interruption should not be limited by law or by being too costly. Otherwise the doors are being opened to all kinds of criminal activities and abortions and that is the last thing we would wish for.

By Věra Řiháčková

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