

Editors' highlights

What's new?

Reviews: Investigating genetic polymorphism in defined diseases is going to open a completely new field of research. No longer are the end-products of this polymorphism – enzymes and proteins in the circulating blood – the focus of research, but the alterations at the cellular and chromosomal level itself. At the medical school of Chicago a place is reserved for those who will discover the cause of eclampsia, still the cause of numerous maternal deaths in the developing world and still seen also in industrialized countries. Preeclampsia is a disease with many different links and faces. It occurs in young and elderly pregnant women, it is associated with renal diseases, it is combined with IUGR and twin pregnancy, has a high incidence at high altitude and is related to severe diabetes mellitus. Medica and colleagues from Ljubljana (page 115) analysed in a meta-analysis polymorphisms in endothelial nitric oxide synthetase, angiotensinogen, angiotensin receptor type I and angiotensin-converting enzyme genes in 33 studies. The results are not very surprising: no single polymorphism was identified as having a major effect. Most likely this reflects the many causes of pregnancy-induced hypertension resulting in one disease, preeclampsia.

Obstetrics and Maternal–Foetal Medicine: Spontaneous early abortion is usually associated with chromosomal anomalies whereas late abortions are in general induced by infections, uterine malformations and maternal diseases. It is estimated that the rate of early pregnancy loss is about 10–15%. Azmanov and colleagues from Sofia (page 127) investigated the distribution of pregnancy loss according to gestational age in 106 spontaneous abortions by comparative genomic hybridization. The frequency of chromosomal aberrations was 37.7%, of which 82.5% were numerical and only 17.5% structural. The highest frequency of aberrations was detected in very early pregnancy (62.5%). Obviously a selection process takes place very early in pregnancy and is in many cases not even recognized by the woman but appears as heavy menstrual bleeding.

For the ease and idleness of doctors and patients, caesarean section rates have been rising continuously during the past years. In most institutions the rate is no longer considered to be an indicator of quality of the obstetrical

service. Since complication rates in caesarean section are low they are not taken into consideration when the decision is made. Moodliar and colleagues from Durban, South Africa (page 138) present a different view. In a tertiary teaching hospital the complication rate was 14.2%, comprising endometritis, wound sepsis, postpartum haemorrhage and bladder injury. The conclusion of the authors, however, is disappointing. We would have expected a recommendation to answer the question, “What should be done as a preventive measure?”

Foetal growth is influenced by many factors such as maternal cardiac output, uterine blood flow, foetoplacental blood flow, maternal nutrition, genetic fitting, maternal diseases (e.g. diabetes) and others. Since maternal diabetes during pregnancy is in general associated with elevated foetal weight and growth Farrell and colleagues from Sheffield, UK (page 146) investigated whether ultrasound foetal biometry is a predictor of foetal hyperinsulinaemia and elevated levels of insulin in the amniotic fluid at delivery. There was an association between foetal growth and size of the foetus and amniotic fluid insulin in women with pre-existing diabetes. It was however concluded that ultrasound measures of foetal size and growth are not sufficiently accurate to predict those infants at risk from foetal hyperinsulinaemia.

The beneficial effect of antenatal corticoid therapy (ACT) is said to be greatest if more than 24 h and less than 7 days elapse between the initial administration of ACT and delivery. A distinction between gestational age and effectiveness has not been taken into account. Costa and colleagues from Rome (page 154) compared two groups of premature infants, those in whom ACT was applied ($N = 170$) and controls ($N = 241$). The results are somewhat surprising: no differences were found between the groups concerning survival, neonatal morbidity, need for and duration of mechanical ventilation and oxygen therapy. In the subgroup of 25–27 weeks, however, some parameters were better in cases receiving ACT. Is it the obstetrical and neonatal service which improves the outcome of the foetus? It would be interesting to hear the opinion and experience of the readers.

Investigating the cause of premature (prelabor) rupture of membranes could provide information about the pathophysiology behind it and deliver the basic knowledge for treatment. Stuart and colleagues from Sheffield, UK (page 158) investigated the proteolytic profile of prelabor

ruptured amnion at term on gelatinase and serine protease activity. The results are not very satisfying: both enzymes do not play a major role.

The management of premature rupture of membranes (PROM) before 25 weeks of pregnancy is the most difficult task and a challenge in obstetrics. The paper from Muris and colleagues from Caen, France (page 163) focusses on this topic. They studied 49 patients with PROM at 16–23 weeks of gestation. Neonatal survival was the indicator of effectiveness. Twenty couples decided for medical termination, whereas 29 chose to continue with the pregnancy. The authors conclude that expectant management can be recommended although the prognosis is poor before the 21st week of gestation.

Reproductive Medicine and Endocrinology: Anabolic androgenic steroids (AAS) are a class of natural and synthetic hormones that promote cell growth and division, resulting in growth of several types of tissues, especially muscle and bone. Anabolic steroids are controversial because of their widespread use in competitive sports and their associated side effects. These side effects of the AAS nandrolone decanoate (ND) were studied by Far and colleagues from Uppsala, Sweden (page 189) in an experimental model in female rats. The findings indicate that high doses of ND cause morphological and physiological alterations in the uterus of female rats associated with a suppression of reproductive capacity. It is tempting to ask whether such influences have been reported in human females active in various sport disciplines.

Cytokines are known to control many aspects of endocrine function. They are involved in folliculogenesis, ovulation and luteinization and modulate these processes. Among these cytokines, tumor necrosis factor alpha (TNF- α) modulates many genes involved in inflammation, infection and malignancy. To bring some more light into this puzzle Chae and colleagues from Seoul (page 176) investigated the impact of TNF- α in different concentrations on cultured human luteinized granulosa cells. The concentration of progesterone and the expression of IGF-II mRNA were significantly lower at higher TNF- α concentrations. Evidently TNF- α plays a regulatory role in ovarian physiology by modulating the IGF system in luteinized granulosa cells.

Adrenomedullin (AM) is a widely distributed novel peptide whose functional role in fertility is still not very clear. Marinoni and colleagues from Rome (page 169) investigated this peptide in seminal plasma of 19 normospermic, 17 oligozoospermic and 15 azoospermic subjects. In comparison to normospermic subjects, AM is higher in oligospermic patients and lower in non-obstructive azoospermic patients. These conflicting results are not well understood and are a subject for further investigation.

Gynaecology, Gynaecological Oncology and Urology: Vulvo-vaginal candidiasis (VVC) is often related to pregnancy and childbirth and to treatment with antibiotics and is also often seen in elderly women. "Recurrent" VVC (RVVC), however, was the subject of investigation by Špaček and colleagues from Kralove, Czech Republic (page 198). They investigated, in 50 patients and 84 cycles, the question of whether altered midluteal serum progesterone concentrations and urinary pregnanediol levels are related to RVVC and compared these findings to 60 cycles in healthy controls. In relation to controls, both hormones were significantly reduced in cases of RVVC, suggesting that hormone deficiency is a contributing factor to the disease.

Ovarian cancer is usually diagnosed at a late stage of the disease. Only 20–25% of ovarian cancers are discovered at an early stage. Staging of the carcinoma is the basis for an effective treatment. The Regional Cancer Registry of the central region of the Netherlands allowed Sijmons and colleagues from Utrecht (page 203) to investigate the question of whether compliance with clinical guidelines is related to patients' outcome in epithelial ovarian cancer. Only 41 of 125 patients were optimally staged. Survival rates were 97% in the optimally staged groups and 68.5% in the non-optimally staged group. In women with grade II or III tumours adjuvant radio- or chemotherapy administered in accordance with the guidelines did not, however, improve overall survival regardless of whether they were optimally staged or not. It is concluded that incomplete staging can lead to undertreatment in both surgical and adjuvant therapy and staging should be conducted according to the guidelines.

Urogynaecology is a major concern of our profession, and in this issue three papers deal with this important subject. Reisenauer and colleagues from Tübingen, Germany (page 214) describe the anatomical condition for pelvic floor reconstruction and discuss the polypropylene implant and its application for the treatment of vaginal prolapse. They emphasize that knowledge of anatomical structure is the prerequisite of a successful surgical procedure. Long-term results, however, are not yet available. Magnetic resonance imaging was used to describe the effect of TVT implantation on the morphology of the stress incontinence system by Tunn and colleagues from Berlin (page 209). Neither damage to the structure nor excessive scar formation could be identified. In the third paper, micturition disorders were investigated in transsexuals—in 18 male-to-female and in 7 female-to-male subjects by Kuhn and colleagues from Bern, Switzerland (page 226). These patients have an increased incidence of disorders probably caused by the surgery including pudendal nerve damage, by hormonal reasons and by ageing.

Wolfgang Künzel
Jim Drife