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Editors' highlights

What's new?

The aim of this Journal is to publish review articles regularly every month and we are happy to continue to do so in the last issue of 2009. The first article deals with the role of myo-inositol in human reproduction and the second is a systematic review of the accuracy of C-reactive protein determination in predicting chorioamnionitis.

Myo-inositol (MYO) is a molecule of the vitamin B complex with important functions in cell morphogenesis and growth. Papaleo and colleagues from Italy, Canada and China review its role in human reproduction on page 120. After unfolding the biologic function of inositol and its derivatives, the authors quote studies examining the part it plays in fertility, oogenesis and the polycystic ovary syndrome. Elevated concentrations of MYO in human follicular fluid appear to play a positive function in follicular maturity and provide a marker of good quality oocytes. Its positive role in PCOS, however, is a consequence of a defect in the insulin signaling pathway (e.g. inositol-containing phosphoglycan mediators) that seems to be implicated in the pathogenesis of insulin resistance. Both the introduction and the discussion of the paper are worth reading and the authors conclude: "*... long-term co-treatment with MYO for patients with PCOS undergoing ICSI cycles does not improve the response to stimulation but significantly ameliorates oocyte quality and reduces the risk of OHSS*".

A systematic review on preterm premature rupture of the fetal membranes (PPROM) is provided by van de Laar and colleagues from the Netherlands and the USA on page 124. PPROM affects 2–4.5% of all pregnancies and is associated with maternal and perinatal morbidity and mortality. One of the main causes is intrauterine infection. C-reactive protein (CRP) is an acute phase protein synthesized in the liver during infection. The prediction of infection in patients with PPROM by measuring CRP may facilitate timely management of chorioamnionitis. Of the 200 articles on CRP and chorioamnionitis and/or neonatal sepsis found in the literature, only five met the authors' inclusion criteria. From these five articles reporting on 381 patients the authors concluded that the current literature does not support the use of CRP in women with PPROM. CRP did not meet the criteria for the use as a predictor of neonatal sepsis and was only moderately predictive of histological chorioamnionitis. The question in this context remains whether neonatal sepsis and/or chorioamnionitis are the best indicators to prove the value of CRP. It would be of interest to know whether the rise of CRP has already taken place before organ manifestations occur.

European view

The European Network of Trainees in Obstetrics and Gynaecology (ENTOG) is the organization of young doctors with voting rights in the Council of the European Board and College of Obstetrics and Gynaecology (EBCOG). The task of ENTOG is to take care of the harmonization of training in our specialty. In 1997 a questionnaire survey was conducted in 13 countries and it is to the organisation's credit that it has again investigated, this time in 25 countries, the status of harmonization in training in 2007. The investigation still shows disappointing results in European countries: hospital visits as a measure of quality of training are still lacking in a huge number of countries and hospitals, and examination requirements are very heterogeneous during training. Some countries have periodic exams, final exams, or both, and no exams exist in Norway or Sweden. The examinations are not consistent and differ widely across Europe in content, focus and difficulty. The picture drawn by Rodriguez of Barcelona, Spain, and colleagues from Greece, Portugal, Estonia and United Kingdom on page 130 shows very impressively what still has to be done to harmonize our training in the specialty and in the subspecialties to guarantee the application of best knowledge and skills to our patients. The conclusion sounds promising: "*Compared with the 1997 survey further harmonization is taking place*". Unfortunately, however, there is no method available to measure the impact of good or bad training conditions on the morbidity and mortality of patients. We should think about this and define indicators to answer this important question.

Obstetrics and maternal–fetal medicine

Ultrasound examinations have improved our understanding of physiologic variables during pregnancy. The blood flow profile and the calculated resistance index (RI) in the uterine artery seem to give good evidence if the course of pregnancy is disturbed. Rampello and colleagues from Italy (page 135) show the results of a 12–14-week examination among 139 cases in a high risk population. Abnormal Dopplers were associated with intrauterine growth retardation, fetal death/spontaneous abortion and small-for-gestational-age birth. The investigations indicate that early changes of uterine arterial RI and the presence of notches seem to be predictive of low birth weight and intrauterine growth restriction in a high risk population.

There is some disagreement in the literature regarding the infection rates after caesarean section following the Pfannenstiel technique or the Joel-Cohen (Misgav-Ladach) technique. The

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difference in postpartum outcome between the techniques was the reason for a multicenter surveillance study by French colleagues (page 139) with the participation of 35 maternity units. The authors observed that overall nosocomial infection and endometritis rates were higher for the Joel-Cohen than for the Pfannenstiel incision (4.5% vs. 3.3% and 0.8% vs. 0.3%, respectively). The higher rate of nosocomial infections with the Joel-Cohen incision was due to a greater proportion of patients presenting risk factors but this technique was an independent risk factor for endometritis. The authors conclude, "*there is evidence proving that the Joel-Cohen technique is an improvement over the Pfannenstiel technique as regards reducing venous thrombosis risk and pain*" but that it "*is associated with a higher incidence of endometritis*". Both conclusions need further validation, however.

What is the optimal maternal age for childbirth, and in particular does young age increase the risk of adverse outcome in mothers and their neonates? That is the topic on which de Vienne and colleagues from Caen, France, focus their investigations (page 151). They report a register-based study of a university hospital for the years 1994–2001, comprising 8514 primiparous women aged less than 31 years and delivering singleton infants. The study shows some unexpected results. It is known that younger maternal age is associated with increased risks of fetal death and anaemia during pregnancy but in younger mothers there were lower risks of pre-eclampsia, caesarean section, instrumental vaginal delivery and postpartum haemorrhage, even after adjustment for confounding factors. This is a surprising finding, at least for the incidence of pre-eclampsia, as there are studies which report the contrary.

Caesarean section rates are constantly increasing in the normal population (women with a cephalic presentation at term) and this has a financial impact on the health care system. On page 173 Sharma and colleagues from Galway, Ireland, shed some light on the development of operative interventions during the past 17 years. The study was conducted on 45,647 women who delivered at a university teaching hospital in Ireland. Of these, 14,867 were nulliparous and undergoing labour at term with a singleton pregnancy and a cephalic presentation. There was a progressive increase in both unplanned abdominal delivery and instrumental vaginal delivery with advancing maternal age. Induction of labour increased the risk of unplanned abdominal delivery. Epidural analgesia was associated with an increased risk of instrumental vaginal delivery and unplanned abdominal delivery. The authors conclude that *the increasing trend of unplanned abdominal delivery in nulliparous women with a singleton pregnancy and cephalic presentation may be partially explained by advancing maternal age*. It would however be of interest to learn whether maternal age is the most influential factor or whether the more permissive attitude of doctors to caesarean section is a driving factor.

Reproductive medicine and endocrinology

Quality assurance in gynaecology shows that not all operative procedures have a concrete indication, especially where laparoscopy, curettage or other smaller operations are concerned. Penninx and colleagues from Hertogenbosch, The Netherlands, (page 178) address this topic by investigating the combined Chlamydia antibody and CA-125 tests in subfertile women in relation to pelvic pathology. This retrospective study compares the findings of 240 laparoscopies with the serological test results. The combined test adds hardly anything to the predictive value of the Chlamydia antibody test (CAT) alone to diagnose severe tubal disease. The combined test is better than the CAT in predicting severe pelvic pathology but is not significantly better than the CA-125 test. The most important conclusion of this investigation, however, is this: if both these tests are normal one could consider not performing a laparoscopy.

It should be known by all researchers working in the field of in vitro fertilization that embryo implantation (ET) catheters can damage the cervical and endometrial tissue. This has been investigated using the application of various catheters by Poncelet and colleagues from Paris on page 183. The conclusion of their investigation is*: "All ET catheters can lead to endocervical and endometrial damage. Severe endometrial lesions were less frequent when soft catheters were used*".

Gynaecology and gynaecological oncology

One of the success stories in gynaecological oncology is the falling incidence of cervical cancer in developed countries as a result of routine screening for abnormal cervical cytology, initially by the cervical smear introduced by Papanicolau. The reliability of the method is, however, influenced by the way the specimen is collected and treated. On page 201 Laiwejpithaya and colleagues from the Siriraj Hospital in Bangkok describe a liquid-based cytology (LBC) method developed in that hospital. Cytological reports of 23,676 Siriraj-LBC specimens obtained in 2006 were compared with those of 25,510 conventional smears obtained in 2004. The overall prevalence of abnormal cervical cytology detected by conventional smear was 1.76% and by Siriraj-LBC was 3.70%. Compared with the conventional method, Siriraj-LBC yielded a significantly higher detection rate of abnormal cytology. Its cost was approximately 67% higher than that of the conventional cytology used in that hospital but 50–70% lower than that of the commercially available LBC techniques in Thailand. The authors promote their method by saying that Siriraj-LBC increases the detection rate of abnormal cytology, improves specimen adequacy, and enhances the negative predictive value without compromising the positive predictive value. For centers where conventional Pap smear does not perform well, they say the introduction of a low cost Siriraj-LBC might help to improve performance.

Since the detection of HPV virus infection as a cause of cervical carcinoma by the Nobel prizewinner zur Hausen of Heidelberg, the search continues for other viruses as a cause of cancer in the genital tract. On page 206 Benharroch and colleagues of Beer-Sheva, Israel, focus on measles virus infection, investigating antigens and RNA as proof of a link with endometrial cancer. Thirty-six of 49 patients with endometrial carcinoma were studied to detect fingerprints of the measles virus. Twenty-six (72%) of the 36 cases showed the presence of measles virus antigens in the tumor cells. Sixteen of 21 cases were positive for measles virus RNA by in situ hybridization. Type I endometrial carcinoma was more positive for viral particles than type II, but type II cancer was, when allied with the measles virus, more often associated with deeper myometrial invasion and with death from tumor. This is the first demonstration of a link between endometrial cancer and the presence of antigens and RNA of the measles virus but the authors are cautious, concluding that these findings do not necessarily signify a causal relationship between the virus and the cancer.

Gynaecological urology

Human T-cell lymphotropic virus 1 (HTLV-1) – formerly Human T-cell leukemia virus 1 – is a retrovirus that can infect humans and primates. It affects primarily CD4-positive T-lymphocytes and can lead in a small number of infected people to T-cell leukemia or to neurological diseases, particularly HTLV-1-associated myelopathy (HAM)/tropical spastic paraparesis (TSP). HAM/TSP is a progressive myelopathy whose symptoms include urinary disturbance. HTLV-1 is endemic in many countries including Brazil, where Costa Diniz

and colleagues from Sao Paulo (page 230) investigated the health of infected and non-infected women suffering from incontinence. Forty-three incontinent women were divided into two groups, seropositive (24) and seronegative (19) for HTLV-1, and data on quality of life and urodynamic data were compared using a standardized questionnaire. The result of the investigation was: seropositive women had a poorer quality of life and more physical abnormalities when compared with seronegative women. The authors conclude that physicians who are involved in the treatment of urinary incontinence should be stimulated to perform judicious and systematic preoperative clinical investigation. In addition, all urogynecologists, especially those living in endemic regions, should be familiar with HAM/TSP. "*This fact is important because early intervention in the course of this viral disease may improve patient quality of life and may prevent severe urinary tract lesions*".

Enjoy reading all the articles.

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