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# European Journal of Obstetrics & Gynecology and Reproductive Biology

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## Editors' highlights

### What's new?

Postpartum haemorrhage (PPH) causes about 20% of maternal deaths in developing countries but the picture is very different in the developed world. For example, in the "Perinatal Data Base 2004 Hesse" PPH was only 1.1% and material death was not evident. If drugs are available and applied early enough in the postpartum period, and if specific causes of PPH (e.g. retention of placental tissue, coagulation disorders, uterine myomas and others) are managed appropriately, maternal death can be prevented in most cases. Nevertheless there are circumstances when oxytocin or prostaglandins are not powerful enough to stop bleeding and in such situations obstetricians, wishing to preserve fertility, hesitate to perform a hysterectomy, especially in young patients. A new method to stop bleeding is pelvic artery embolisation (PAE), reviewed on page 129 by [Jerome and colleagues](#) from France and the USA. In a literature search they identified 19 articles, of which 13 are included in their study. A total of 168 women underwent PAE, which was successful in 154 cases (92%). Seven hysterectomies had to be conducted following PAE and four patients died. The major question asked by the authors was whether successfully treated women can become pregnant again. In this population 45 pregnancies were observed: 32 women had a live birth (71%), 8 had a miscarriage (18%) and 5 (11%) chose termination of pregnancy. PPH occurred again in six cases, leading to two hysterectomies. The high success rate of PAE and the opportunity for the woman to become pregnant again justify its use in PPH if trained personnel are available.

[Abdool and colleagues](#) from Croydon, UK, with their review of postpartum female sexual function (page 133), provide a profound insight into sexual behaviour during a special phase in a woman's life. They have searched the literature on sexual health in the postpartum period and they begin by discussing sexual dysfunction under the four internationally agreed headings—sexual pain disorder, hypoactive sexual desire disorder, arousal and orgasmic disorder. The second half of their paper is devoted to factors impacting on postpartum sexuality—instrumental delivery, caesarean section, breastfeeding and postpartum depression. This review covers a topic seldom taught in seminars or training courses but which should be understood by everyone who counsels women after delivery.

The third review in this issue, by [Semkova and Black](#) from Sofia and London (page 138) deals with a rare disease, pemphigoid gestationis (PG). It is described as a self-limiting blistering dermatosis of pregnancy and the puerperium, with an incidence of 1 in 50,000 pregnancies. This autoimmune subepidermal bullous dermatosis results from the recognition of placental proteins as foreign and the subsequent production of anti-placental antibodies that cross-react with the same proteins in skin. The review presents the latest scientific and clinical data in relation to its pathogenesis and treatment and is well worth

reading to understand the newest developments in this very specific field.

### Obstetrics and maternal–fetal medicine

There was a time in antenatal care when the impact of high maternal blood sugar concentrations on the fetus was not well understood. They resulted in fetal malformations, macrosomia and often, in cases of severe diabetes mellitus, in growth retarded infants. Even intrauterine fetal death was not a rare event. Normal concentrations reduced not only the maternal diseases resulting from elevated blood sugar but also the negative impact on the fetus. This thinking was introduced by Professor GD Roversi and colleagues from Italy with the paper, "A new approach to the treatment of diabetic pregnant women. Report of 479 cases seen from 1963 to 1975" (*Amer J Obstet Gynecol* 1979; 135: 567). It is therefore of interest to see again a paper from Italian researchers, [Lapolla and colleagues](#) from Padua, who have investigated gestational diabetes mellitus (GDM) in a multicenter study (page 149). From 1999 to 2003 data from 3465 GDM women in 31 Italian regional obstetric or diabetes centers were collected. The results suggest that Roversi's recommendations apply not only to diabetic patients but also to patients with GDM. Stillbirth and neonatal mortality rates were no different to those in the general population, but the number of congenital malformations was twice as high. The authors conclude: "The higher rate of congenital malformations is probably attributable to unrecognized prior diabetes causing metabolic derangements in the first weeks after conception", but they do not provide a working hypothesis on preventing malformations in future.

An investigation on how to deliver extremely low birth weight (ELBW) infants was conducted by [Vimercati and colleagues](#) from Bari, Italy (page 154). Their retrospective study focussed on an important clinical decision-making process: mode of delivery and timing of caesarean section in relation to gestational age. They investigated 84 cases of ELBW and considered mortality and survival with neurological disabilities as outcome measures. Forty percent of all births were at less than 25 weeks of gestation and birth weight was  $\leq 500$  g in 14%. After adjustment using multiple logistic regression, only extreme prematurity of  $\leq 25$  weeks and birth weight below 500 g had significant effect on survival, regardless of mode and timing of delivery. This important finding will influence obstetrical decision making in such cases.

Studies have suggested that HIV infected women are at greater risk of postpartum complications than uninfected women, but those studies did not include uninfected controls. [Sebitloane and colleagues](#) from Durban, South Africa (page 158) investigated 341 HIV infected women and compared them with 427 uninfected controls. Rates of postpartum infectious morbidity (IM) were similar in both groups but the risk of postpartum infections increased significantly in infected women with a CD4 count of

<200 mL<sup>-1</sup>. For women considered “low risk”, – i.e. HIV infected women with good CD4 counts, or those with no HIV infection – an episiotomy was associated with a two-fold increased risk of IM. The authors recommend that prophylactic antibiotics should be considered in all women with episiotomies, and in all HIV infected women with CD4 counts <200 mL<sup>-1</sup>.

### Reproductive medicine and endocrinology

The success of in vitro fertilization depends on an enormous number of factors in the process of fertilization, including cell-to-cell interaction between sperm and ovum and a variety of factors during implantation of the fertilized ovum into the endometrium. The success rate, at present 20–30%, can be raised by transferring high numbers of embryos into the uterine cavity, using well-selected embryos in good condition, conducting intra-cellular sperm injection or influencing sperm motility. The last approach was investigated by [Kalthur and colleagues](#) from Manipal, India (page 167), who asked whether sperm motility can be enhanced by co-incubation with cumulus oocyte complex. They found that without co-culture sperm motility declined with incubation time and ceased completely by 72 h. Inclusion of cumulus cells with sperm almost doubled the motility at 48 h, and at 72 h the sperm and cumulus group had 14% total motility compared to 0% in the sperm-alone group. This is an interesting result which creates more questions than it answers.

### Gynaecology and gynaecologic oncology

The localisation of endometrial tissue outside the uterus is a phenomenon which is poorly understood. Which mechanisms keep tissue inside the uterus within specific borders and what happens if it leaves its usual place? Some authors suggest that abnormalities of genes regulating apoptosis are involved. [Zubor and colleagues](#) from Martin, Slovak Republic, investigated the expression of pro-apoptotic and anti-apoptotic genes in eutopic endometrium from 30 healthy controls and 15 women with endometriosis, in relation to disease occurrence and severity (page 172). A significant increase in expression of mRNA p53 (1.42 versus 1.02;  $p < 0.05$ ), and Bcl-xS (0.41 versus 0.19;  $p = 0.0006$ ) was found in women with endometriosis compared to controls. The results point to increased transcription of pro-apoptotic genes (p53 and Bcl-xS) in eutopic endometrium, indicating that dysregulation of apoptotic gene transcription is associated with endometriosis.

On page 180 [Carmargo-Kosugi and colleagues](#) from Sao Paulo, Brazil comment that endometriosis is a polygenic, multi-factorial and highly prevalent disease that affects approximately 15% of women of reproductive age. To evaluate a possible association between endometriosis and polymorphism in the p27 gene, they analyzed 104 patients and 109 controls. Distribution of genotype and allele frequencies of p27 V109G polymorphism was significantly different between endometriosis cases and healthy women ( $p = 0.016$  and  $0.002$ ). Women who had at least one mutated allele had a twofold chance of developing endometriosis

(OR = 1.9; 95% CI, 1.120–3.343). The authors conclude that the polymorphic variant at codon 109 of the p27 gene seems to be associated with a higher risk of endometriosis. [Chen and colleagues](#) from Wuhan and Xiamen, China, studied the inhibitory effect of 15-R-LXA4, a Lipoxin A4 (potent stimuli for human monocyte migration and adhesion) in a murine endometriosis model (page 200). Little is known about the function of lipoxins in endometriosis and this study was designed to examine whether 15-R-LXA4 exerts an inhibitory effect on the development and progression of the disease. The results are very stimulating for future research: 15-R-LXA4 inhibits the progression of endometriotic lesions, possibly by suppressing the gene and protein expression of IL-1b and TNF-a.

The association of Human Papilloma Virus (HPV) and cervical cancer discovered by Nobel prize winner Prof. Harald Zur Hausen of Heidelberg has inspired many colleagues to conduct research on HPV epidemiology. [Jancar and colleagues](#) from Ljubljana (page 184) investigated the incidence of HPV genotypes in 284 samples from Slovenian women. The distribution shows a high prevalence of HPV 16 (64.9%), 18 (12.2%), 33 (4.7%) and 45 (4.1%), with eight remaining types totalling 14.1%. The conclusion of the authors is clear: HPV vaccination with currently available vaccines could prevent up to 77.1% of cervical cancer in Slovenia, caused by HPV 16 or 18. Age-related prevalence was investigated by [Xue and colleagues](#) from Shanghai, China, (page 214), who detected HPV in 5173 (30.2%) of 17,148 women aged 17–79 years. The highest prevalence was in the ≤20-year age group (45.2%), after which it declined rapidly to 28.5% at 21–30 years and then ascended slowly to 38.0% in the ≥61-year group. This important observation shows that routine smear testing should not be given up but intensified in older women since viral load increases with age.

### Gynecological urology

Finally, with the paper from [Hinoul and colleagues](#) from Belgium and The Netherlands we have an excellent review of urinary stress incontinence (USI). We have placed it in the section on Gynaecological urology to raise awareness of this important field as a subsection of our specialty. Besides a historical overview the authors also give a critical review of procedures past and present, ranging from the Marshall–Marchetti–Krantz cystourethropexy to the newest developments of the transobturator tape procedure, radiofrequency energy micro-remodelling and stem cell therapy. The various procedures are classified according to their effectiveness in Table 1, which indicates that anterior colporrhaphy should no longer be used in the treatment of USI. Many procedures are still being used but the authors conclude: “In view of the level I data and the long-term observational studies available on the TVT procedure, it can be considered to be the new gold standard for the treatment of USI.”

Enjoy reading this article.

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