

## Extracts from Pertinent Current Literature

### Folic acid Supplementation and Reduced Risk of Autism Spectrum Disorders (ASDs)

*Adanu RMK, Boama V, Guinto VT, Sosa CG. Contemporary Issues in Women's Health. Int J Gynecol Obstet 2013;122(3):186.*

Autism spectrum disorders (ASDs) are a group of inheritable neurological disorders that are estimated to affect 1% of the child population worldwide. Currently, these are considered as a mixture of genetic and environmental factors leading to a variable clinical presentation. A recent population cohort study (The Norwegian Mother and Child Cohort Study) has reported that women who take folic acid supplementation during conception period and early pregnancy may have a reduced likelihood of having a child with an ASD. It is an ongoing prospective study that began in 1999, in which women were recruited in early pregnancy. The authors reported in 2011 that folic acid supplementation was associated with a reduced risk of severe language delay at three years of age. The incidence of children with ASDs was 0.10% in the group of mothers taking periconceptual folic acid, compared with 0.21% in the group of mothers not given folic acid supplementation. Some of

the strengths of the study were that the authors evaluated epidemiological flaws such as potential selection bias and confounding variables within the main database and with external data. Maternal characteristics were similar in both groups. After adjusting for confounding variables, the reported odd ratio was 0.61 (95% confidence interval, 0.41-0.90), which indicates that folic acid supplementation may reduce the risk of autistic disorders. Although, a causal relationship was not established, the authors concluded that administration of folic acid supplementation around periconceptual period was associated with lower risk of ASDs providing evidence for further research in relation to genetic, biological and environmental factors.

**Contributed by Dr. Riffat Shaheen HOD, department of Obs/Gyn, Federal Govt. Polyclinic (PGMI), Islamabad.**

### Effects of metformin in women with PCOS treated with Gonadotrophins in IVF and ICSI cycles: a systemic review and meta-analysis of Randomised Controlled Trials

*Palomba S, Falbo A, La Sala GB. BJOG 2013; 120(3): 267-76.*

Metformin has been widely used during last 15 years in women with polycystic ovarian syndrome

(PCOS), and many women with PCOS who are infertile receive gonadotrophins while being

treated with metformin. It has been reported that metformin improves ovulatory menstrual cyclicity and clinical pregnancy rate and optimizes the efficacy of other drugs in inducing ovulation. The administration of gonadotrophins represents the final therapeutic step in infertile women with PCOS for induction of controlled ovarian hyperstimulation (OHSS) during in vitro fertilization (IVF) and intracytoplasmic sperm injection (ICSI) cycles programmes. A large number of women receive gonadotrophins while they are on metformin therapy. In this meta-analysis, ten randomized controlled trials (RCT) were included with a total of 845 women having PCOS. No effect of metformin dose

and duration of treatment prior to gonadotrophin therapy was observed.

Metformin administration in IVF/ ICSI cycles had no effect on the rates of pregnancy rate (OR 1.20, 95% CI 0.90-1.61) and live birth (OR 1.69, 95% CI 0.85-3.34). However, meta-analysis showed that metformin administration reduced the risk of OHSS (OR 0.27, 95% CI 0.16-0.46) and of miscarriage (OR 0.50, 95% CI 0.30-0.83), and it increased the rate of implantation (OR 1.42, 95% CI 1.24-2.75).

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## Human Papillomavirus Update: In Particular its Vaccination

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*Gurumurthy M, Peevor R, Fiander A. Obstetrics, Gynaecology and Reproductive Medicine 2013; Vol 23 (8):231-237.*

Although this very informative review gives a comprehensive update on Human Papilloma Virus (HPV) as well as its vaccination but in this extract mainly an update on HPV vaccination is being given.

HPV is responsible for 99.7% cervical cancers, later causing one death every two minutes worldwide. Over 200 types of HPV have been identified and divided into low and high risk groups, based upon their oncogenic potential. Almost 80% of sexually active women will acquire HPV during their life time. Most infection are transient but persistent ones invariably cause intraepithelial neoplasia or even cancer. It is transmitted by skin to

skin contact. Prophylactic HPV vaccine prevents disease by the included HPV types and potentially prevent 70-75% cases of cervical cancer. As it is not possible to grow HPV in culture therefore a live vaccine can not be made. Available vaccines contain virus like particle (VLPs) and no actual viral DNA, so there is no risk of vaccine causing an infection. Two types of VLPs containing vaccines are available. Gardasil is quadrivalent i.e. it contains VLPs of 04 types: HPV 6,11,16 and 18. Cervarix is bivalent, containing VLPs of two types; 16 and 18. Both vaccines induce high titres of type specific antibodies, almost 10-100 times more than those after a natural infection. The UK added

HPV vaccination to the national immunization programme in 2008. From September 2012, Gardasil replaced Cervarix in the HPV vaccination programme. These vaccines are showing cross protection against other HPV types as well. They are safe and well tolerated, but not recommended during pregnancy. Whereas Gardasil can be given during lactation, but Cervarix is given only if benefit outweighs the risk. These vaccines can be administered concomitantly with other vaccines without reducing efficacy. Vaccine dose is 0.5ml intramuscular with three dose regimen at 0, 2 and 6 months for Gardasil and 0,1 and 6 months for Cervarix. This is effective for 5 yrs. The role of booster dose is currently being studied. It is likely that the benefits will be seen over a 15-20 yrs period. The FDA approved Gardasil for males and

females aged 9-26 yrs and Cervarix for females 9-25 yrs. Australia has become the first country to introduce gender-independent prophylactic HPV vaccination.

Research is ongoing in this field in terms of childhood vaccination (even for boys) and older women, preparation of second generation prophylactic vaccines to prevent more cases of cancer, as well as for development of the therapeutic HPV vaccination.

Continued education and screening of the vaccinated population is still required, as prophylactic vaccination does not prevent all cases of cervical cancers.

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## Unsafe Abortions; An Unchecked Killer?

**Source: Sehrish Wasif. 'Women Forced To Seek Abortions from Amateur Doctors'. Tribune Express, Islamabad. Dated 24.08.2013**

Unintended pregnancy culminating in induced septic abortion with its serious sequelae, has always been an alarming gynaecological emergency, worldwide. Unless couples are counselled for and provided effective contraceptives and safer post abortion care facilities, these emergencies are not going to decrease.

Regarding this issue we came across a very informative article in 'Tribune Express', which highlights the report on 'Post abortion care in Pakistan', by Population Council in collaboration with Guttmacher Institute and National Committee for Maternal and Neonatal Health. The report says that according to Pakistan Demographic and JSOGP 2013, Vol.3, No.3

Health survey 2006-7, the country's maternal mortality rate was 276 per 100,000 live births and 06% of all maternal deaths resulted from complications of Unsafe abortions. As the current law in Pakistan permits abortions only to save a woman's life, hence the women may be forced to seek abortion by untrained health providers. It is also reported that 25% of Pakistani women are at risk of unintended pregnancy as they are not using any contraceptive. The contraceptive use in married women aged 15-49 is just 30%, and the unmet need for contraception is almost 25%. An estimated 15 per 1000 women are being treated for complications of Induced/spontaneous abortion every year.

## Various Contributors

In 2012, nearly 700,000 women had seek treatment for the complications of unsafe abotions done by untrained health providers. Out of these, 62% received post abortion care from private sector and 38% from the public sector. The report further says that 75% health facilities do not have Mannual Vaccum Aspirator (MVA) kits, recommended by WHO for safe post abortion care and they still rely on invasive procedures like D&E/ERPC for this purpose. An estimated 41-49% of abortions performed by unskilled providers result in complications, compared with just 1 in 10 abortions performed by a skilled gynaecologist.

**Recommendations** put forward in this report are followings:-

1. Encouraging the use of WHO recommended MVA.
2. Improving the provision of effective contraceptives.
3. Developing protocols for provision of post abortion care.
4. Training of health workers and medical staff, should be proficient.

In this meeting Minister of State for National Health Services also stressed upon the importance of availability of safer methods for treating post abortion complications at all health facilities in the country.

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## Annotation/Comment

It is the moral duty of SOGP to intervene and

- Curtail Unsafe Abortion.
- Stop Untrained providers to play HAVOC, thereby to
- Avoid Risk of Unintended Pregnancies.

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