Menopause Matters
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BIO IDENTICALS

It is fantastic to see that more attention is being paid to the importance of the menopause, estrogen deficiency and its consequences, both in respect to symptoms and later health. Since publication of the NICE guideline on diagnosis and management of the menopause in November 2015, more clarity has been provided about treatment options, although the information has not yet reached everyone with many women and some healthcare professionals still expressing confusion around benefits and risks of Hormone Replacement Therapy (HRT) in particular. Sensationalist headlines do little to dispel myths, and indeed are more likely to add to the confusion. However, I do strongly believe that enough evidence has now been provided and thoroughly analysed such that the time has come to view HRT as a very useful option for controlling menopausal symptoms and providing later health benefits with little risk for the majority of women.

HRT is an obvious option to consider when treating menopausal symptoms which are caused by estrogen deficiency, since its aim is to replace estrogen. In women who have not had a hysterectomy, progestogen or progesterone is added to the estrogen to prevent the estrogen stimulating and causing a thickening of the womb lining (the endometrium). Different types and routes of both estrogen and progestogen are available and the type and route chosen are determined by each woman's preference, as well as the type of symptoms that she is

experiencing, her medical and family history and any other current medication. Individualisation is essential.

This may appear straight forward so far. However, an increasing concern is the development of practitioners prescribing “compounded bio identical hormones” which are promoted as being natural and individually prepared to best suit the hormonal needs of individual women. The term “Bio identicals” refers to hormones that very closely resemble estradiol, estriol, estrone (all types of naturally occurring estrogen), progesterone, dehydroepiandrosterone (DHEA), and testosterone as produced by the human ovary and adrenal gland. While the message of replacing hormones which are very like the hormones that we produce ourselves until the menopause seems sensible, hormones are being provided by compounding pharmacies which are not standardised or government approved in terms of content, dose and balance between estrogen and progesterone.

Compounding bio identical pharmacies have been practicing in USA for a number of years and have recently appeared in the UK. Investigations in the USA are being reported. In 2001 the Food and Drug Administration (FDA) collected and analysed 29 compounded drugs. Two of the compounded hormone drugs failed analytical tests because of contamination risks. In 2012 “More” magazine commissioned laboratory tests of bio identical hormones produced by 12 compounding pharmacies. It was found that these hormones were of unreliable potency and would not meet the standards for the FDA requirements for commercially manufactured drugs and in fact because of

the variable hormone levels, concern was expressed that endometrial cancer risk could be increased.

When considering the use of HRT, emphasis on risk has been widely publicised over recent years and it is understandable that women may wish to take hormones which are seen to be as natural as possible and closely resemble women's own hormones. What is often not realised is that both estrogen and progesterone can be prescribed as standardised, regulated, government approved HRT in ways that very closely mimic our own hormones. These preparations which are available with NHS prescriptions could also be described as "bio identical" and are prescribed in approved forms.

The difference between hormones prescribed in compounding pharmacies and those prescribed in approved forms is that while some of the basic hormones used in both settings may be the same, ie estroegn and progesterone, the amounts and balance between estrogen and progesterone are not provided in regulated, approved forms in compounding pharmacies such that the stimulating effect of the estroegn on the endometrium may not be adequately balanced by the progesterone provided. This has raised concerns about these compounded combinations leading to increased risk of endometrial cancer, and cases have been reported. In approved regulated forms of HRT, the appropriate dose and balance has been thoroughly investigated. Use of the term "bioidenticals" is in itself confusing and misleading and better would be to adopt the terms—government approved, or non-government approved hormone therapy.

Another concern is that compounding pharmacies may recommend blood tests or saliva tests to supposedly determine hormone requirements and to assess response to treatment, all at a cost to the woman. While there are some situations when measuring hormone levels by blood test may be useful, saliva levels are of no benefit and blood tests are rarely helpful or required. Better is to start treatment in standardised doses and measure response by effect on symptoms and presence or not of side effects.

Finally, it should be noted that individualisation is indeed the key and that even the use of natural type estrogen and progesterone in government regulated and approved form may not suit the woman. It is always necessary to be prepared that often changes in type and/or route of hormone therapy may be required to provide treatment which provides benefit while minimising side effects, but at all times regulated, government approved hormones should be used rather than compounded, non-government approved hormones.

Recently published national and international guidelines support this advice with NICE guideline on Diagnosis and Management of Menopause stating "..*bio identical formulations that are compounded for an individual woman according to a healthcare provider's prescription are not subject to government regulations or tested for safety or quality and purity of constituents, therefore their efficacy and safety are unknown*". The recently updated International Menopause Society recommendations on women's midlife health and menopause hormone therapy state that "*Prescribing of compounded BHT is not recommended due to the lack of quality control and*

regulatory oversight associated with these products, together with lack of evidence of safety and efficacy."