Natural Progesterone in Anti-Ageing: Looking at the Evidence

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The potencies of natural progesterone (P4) as progestogenic constituent of menopausal hormone therapy (MHT) are widely equalized with the activities of progestins, the synthetic progestogens. But P4 displays distinct dissimilarities from progestins. Much attention has been paid to its effect on the mammary gland: In contrast to most progestins, orally administered micronized P4 combined with transdermal estradiol does not increase the risk of breast cancer. Other characteristics, like the beneficial impacts on the arterial vascular system and the nervous system, have not attracted comparable interests until now. P4 functions as aldosterone-antagonistic, natriuretic and blood pressure lowering compound in hypertensive patients by its activities within the renin-angiotensin-aldosterone system. It also contributes to the reduction of atherosclerotic plaque formation via direct actions on the vessel wall and by not interfering with the beneficial metabolic effects of estrogens (E). Consequently, P4 does not increase the risk of stroke and coronary heart disease in conjunction with E. P4, which is also synthesized by neurons and glial cells, and its metabolites, particularly allopregnanolone, are important neurosteroids. Their hypnotic, tranquilizing and anxiolytic capacities are typically mediated by augmented GABA-A receptor function, improving sleep disturbances and depressive mood. The neuroprotective mechanisms of P4 after stroke, specifically against ischemic tissue damage of the brain, have shown to be directly triggered through binding to the progesterone receptor. Another interesting result of recent studies is the potential to reduce hot flushes independently of E. Altogether this body of evidence on the benefits of P4 may be of vital importance in the pharmacological prevention of age-related diseases and suggests using it as first-line progestogen in MHT.