Use of essential oil therapies in immunocompromised patients


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Sir,

The use of essential oils in aromatherapy and massage is well documented. Over the past decade use of these oils has greatly increased. These products are now readily available in most high street stores as well as via mail order or the internet. Some hospitals allow their use in a variety of clinics and departments and they are advocated for a number of disease processes, both physical and psychological. The anti-inflammatory properties, as well as the antifungal and antibacterial action of a number of these oils have been reported. However, their underlying mechanisms of action are poorly understood. There are also various reports that state they are cytophylactic, actively stimulating the immune system in order to ‘fight-off’ infection. In hospitals where essential oils are being used to help reduce anxiety in different groups of patients undergoing stressful procedures, these anxiolytic agents are administered by warming the oils so that their vapour may be inhaled. Inhalation of the vapours of these oils results in active agents reaching a maximum blood concentration within 20 min.

Let us consider the consequence of these reported properties; both anti-inflammatory and cytophylactic. Patients with advanced neoplasms of any type are likely to have non-specific defects in both humoral and cellular immunity which may contribute to their increased risk of serious infection. Juergens et al. (1998) reported on the inhibition of cytokine production by the active agent (1,8-cineole) found in many essential oils. The inhibition of inflammation mediator production by essential oils in an environment where immunosuppressed patients are being treated (i.e. a transplant or oncology ward) will presumably act to further suppress an immune system struggling to cope.

Following myelo-ablative therapy and marrow transplantation, patients endure an obligatory period of severe pancytopenia. Although this is limited to a few weeks, some patients have persistent or recurrent pancytopenia and most marrow transplant recipients also have concomitant disruption of mucosal surfaces and indwelling iv lines. All of these factors result in significant suppression of humoral and cellular immune function for some time. It is perhaps not surprising that complicating infections are both frequent and severe following the transplant. Good prophylactic practice is advocated, avoidance of exposure to fresh flowers and plants is recommended.

The risk of infection in these transplant patients would now be ultimately due to the interaction of two major factors; the epidemiological exposures encountered by the individual and the net state of immunosuppression from chemotherapy, radiotherapy and aromatherapy. The potential synergic effect of the prescribed immunosuppressive drugs, coupled with the action of these oils could increase the patient recovery time further and unnecessarily expose them to opportunistic infections. In elderly patients, who are known to have reduced immune system activity, such oils could predispose them to infections (or further complicating, secondary infections, should they have a pre-existing infection).

Now, if we consider the converse situation with respect to essential oil activity, then it is also reported that these oils are cytophylactic. Again, there may be complications as a result of the use of essential oils in certain circumstances. Immunosuppressed patients having undergone transplantation are suppressed in order to prevent graft rejection mechanisms initiating. If essential oils are actively stimulating the immune system, they are surely acting in an antagonistic manner to the prescribed medication.

These two converse scenarios should dictate caution in the circumstances of their use, until further research can clarify the situation. Unequivocal, scientific data are required to demonstrate which oils have suppressive or stimulatory action on immune system function and also to demonstrate what degree of synergic or antagonistic activity exists. These homeopathic treatments are not under the same stringent regulations that POMs are. The widespread availability of these oils coupled with their anecdotal therapeutic action from non-medically, non-scientifically trained personnel requires further debate and study.

References


