Low Dose Cytokines & Mercury Amalgams Fillings

Explanation of IAOMT position: Although this SR may be considered outside the current “standard of care” in the U.S., it does not detract from it’s merits and deserves serious consideration for use as long as one takes into the legal ramifications of its use and potential risks/benefits for one’s patients. See: Legal Aspects of SR. Well done SR!

Name of Scientific Review: Low Dose Cytokines & Mercury Amalgam Fillings

Alternative name(s) of Scientific Review: The use of Low Dose Cytokines to counteract the signaling effects of Mercury Amalgam Fillings

This Scientific Review is related to: Dentistry and Medicine

This Scientific Review is a: Procedure

Do you have a vested financial interest in this Scientific Review? No

Purpose of the Scientific Review: To provide information to aid the dentist in the use of a modern biotherapeutic approach to preparing their patients for mercury removal

Scientific Review History: Research in the fields of Psychoneuroendocrineimmunology (PNEI), Toxicology and Immunology has identified the cytokines/interleukins as the messenger molecules of the body. The use of cytokines has been heavily researched and investigated by the Pharmacy industry with mixed success. Interferon has been used in the treatment of MS patients. While there has been mixed success, their usage has always been accompanied by rather severe side effects. Recent scientific research from the scientific department of the Italian firm GUNA, Inc. has shown how cytokines at the physiological rather than the pharmacological concentration, can be used to help the body self regulate the natural homeostatic balance within the complete PNEI system as mercury disturbs the delicate balance of the concentrations of these molecules in the body. The use of the principles of physiological regulating medicine can now provide the dentist with simple but effective tools to deal with the effects of Hg toxicity without any side effects.

Briefly describe the Scientific Review: The IAOMT has long championed the cause and effects of mercury toxicity and now more recent scientific research is starting to prove the mechanisms through which the mercury has the toxic effects on the body. Simultaneously the latest scientific research on the use of low dose pharmacology is providing the dental practitioner with a bigger and more effective tool box to deal with the effects of mercury toxicity. The use of low dose cytokines have been scientifically proven to be effective without any side effects associated with pharmacological intervention and provide an excellent support program to the patient undergoing mercury removal.
A specifically, by outline if appropriate, describe the Scientific Review: The signaling aspect of mercury released from amalgam fillings causes a signaling cascade of inflammatory mediators resulting in an imbalance to the PNEI axis, causing a loss of Homeostatic balance in the patient. To aid the dentist in supporting his patient during a course of mercury removal the use of low dose cytokines is to be advocated. This is to be done in conjunction with the normal nutritional support to aid the redox balance during the mercury removal (the appropriate levels of vitamins, minerals, glutathione, whey proteins must be provided). The use of these low dose cytokines has been scientifically proven to be as effective as the use of NSAIDs and Corticosteroids but without the side effects of either. Providing a cocktail of GUNA Flam, GUNA Cell and GUNA Matrix in a liter of water protects the body against any side effects that the patient may experience during mercury removal. 40 Drops of each remedy should be placed in a liter bottle of water and the patient should drink this throughout the day. This ensures that the patient receives the stimulation of the remedies to help rebalance the HPA axis and turn off the detrimental signals. It also helps to ensure that the patient is adequately hydrated during the mercury removal process. For further details please refer to Appendix A.

Manufacturer(s), Distributor(s), or Publisher: Guna, Inc., 3724 Crescent Court West , Whitehall, PA., 18052, USA

Scientific Literature:


5. Effects of Gold on cytokine production in vitro. Lampa et al 2002 J Rheumatol Jan;29(1);21-8

6. Effects of different doses of IL1B on isolated Human fibroblasts: University of Milan


For further scientific literature please see Appendix A & B at the end of this document

Legal Aspects of this Scientific Review: Each practitioner would need to qualify in the use of physiological regulating medicine to use the advised protocol. The academy of Physiological Regulating Medicine provides a fully certified learning course at www.prmacademy.com. Each practitioner should also ensure that this is regulated within their own state/province jurisdiction. The intention of this scientific review is to inform the dental surgeon about the latest advances in the use of cytokines and their relevance in dentistry.
Appendix A: The use of low dose cytokines to counteract the signaling effects of Hg from amalgam fillings

Professor Paranandi of the University of Ohio has presented his most recent research to the IAOMT on several occasions. The research of Professor Paranandi demonstrates that mercury toxicity is linked to the aetiology of cardiovascular disease. The mechanism through which this happens occurs at the endothelial lining resulting from damage done to the phospholipid cell membrane.

It is through the activation of the Phospholipase A2 and Phospholipase D enzymes amongst others that the Arachidonic acid pathway is activated through the stimulation of the Cox 2 and Lox enzymes. It is the signaling aspect of the activation of these molecules that is so important and is responsible for the damage to the cell membranes affected. This causes a whole cascade of events affecting the complete Psycho Neuro Endocrine Immunology (PNEI) axis and thus causes Hg to have a widespread effect on the whole body. Traditional pharmacology uses NSAIDs and Corticosteroids to help deal with the effects caused by the Hg toxicity in the body. These however, are not without well documented side effects and so sometimes the cure can be worse than the disease.

The scientific principle of Hormesis states that the action of a particular molecule either exogenous or endogenous will have a different effect on the body depending on the dosage that the individual is exposed to. High doses can inhibit a particular response in an animal while low doses of the same material may stimulate a desired response. TNF alpha is a normal first stage inflammatory messenger molecule which is necessary for the survival of a cell. However, in high concentrations the same molecule will cause cytotoxicity and harm the cell. Research from the scientific department of GUNA in association with the University of Milan has demonstrated that the correct physiological dose of any material in the body lies in the concentration range between 10 to the minus 7 and 10 to the minus 12, or the range of nanogrammes per ml to picogrammes per ml. Higher doses than this in the range of microgrammes per ml will have a pharmacological effect but will produce side effects. Higher again concentrations of milligrammes per ml will cause toxic effects in the body.

As a result of the activation of the Phospholipase enzymes due to the presence of Hg at the cell membrane the Cox 2 pathways get activated and an excess of Interleukin 1 (IL1) is produced. The interleukins IL1 alpha and IL1 beta are the most active primary mediators secreted by TH1 cells to induce inflammation in the body. They do this by activating the COX2, Prostaglandin E2 and nitric oxide pathways and so cause inflammation. Anti interleukin 1 at a physiological dose can act as a NSAID, corticosteroid or salicylate without any side effects associated with these allopathic medicines. Therefore if we can use anti interleukin 1 in a safe and effective manner we can help reduce the inflammatory processes in our patients with Hg toxicity, such as patients presenting with osteo-arthro-myalgic pain. Anti IL1 is found in GUNA Flam. Due to the particular presence of certain cytokines at a physiological dose GUNA Flam helps up regulate TH2 lymphocytes to help balance the excessive expression of TH1 inflammatory cytokines.

As Hg will also attack the membranes of the mitochondria GUNA Cell has been added to cocktail. GUNA cell provides the patient with all the constituents of the Krebs cycle at a physiological dose to help maintain and restore normal mitochondrial activity. It also contains alpha lipoic acid, Fumaric acid, as well as the coenzymes necessary to aid in the removal of toxins from the intracellular space. The Michaelis Menten Law which states that in a reaction catalyzed by an enzyme, the reaction velocity is inversely proportional to the concentration of the enzymatic substrate. Therefore a low dosage, the physiological dosage, of the enzymatic substrates is in GUNA Cell.
The cell membrane is a morphofunctional unit and is surrounded by the extra cellular matrix. The cytokines, neuropeptides, vitamins and nutrients etc must all travel from the blood capillaries to the cell membrane through the extra cellular membrane. It is in the extra cellular matrix where we find the Reticular endothelial system. Here we find collagen and elastin fibres, nerve endings of the autonomic nervous system, adipose cells, mast cells and macrophages etc. The extra cellular matrix is a peculiar connective tissue consisting of water, proteins, mucopolysaccharides and glycosaminoglycans. A properly functioning fluid matrix is essential for proper function and Hg can destroy or clog up different parts of the extracellular matrix before affecting the cell membrane. To keep the matrix fluid and to help protect the messenger molecules that must move through this matrix we add GUNA Matrix to the cocktail.

The GUNA Matrix provides the body with the ability to mobilize the toxic load from the cells into the lymphatic system. It also helps stimulate IL6 which is known to be able to activate metalloproteinases. These enzymes help liquefy the matrix allowing the toxins blocking the matrix to flow out of the matrix.

The combination of GUNA Cell, GUNA Flam and GUNA Matrix in adequate water provides a safe and effective method, without any side effects due to the physiological concentration of the dosage, to help relieve inflammation and turn off the signaling component of the Hg released from the amalgam fillings making the removal process of the amalgam fillings a more pleasant experience for the patient.

**Appendix B: the use of low dose cytokines to counteract the signaling effects of Hg from amalgam fillings.**

4. Biochemistry and Molecular Biology (W H Elliott & D C Elliott; Oxford University Press; 2nd ed 2001)
5. Biochemistry: the chemical reactions of living cells (Metzler D E; Academic Press; 2nd ed, vol 1, 2001)
7. Cellular and Molecular Immunology (Abbas et al.; Saunders, 2nd ed, 1994)