

# Amalgam Contact Hypersensitivity Lesion: An Unusual Presentation-Report of a Rare Case

Dear Sir,

With great interest we read an article by Kristin *et al.* entitled “Amalgam contact hypersensitivity lesion (ACHL): An unusual presentation report of a rare case” that is published in the *Ann Med Health Sci Res* 2014;4, Suppl S3:320-3. In this article, the authors report a case of ACHLs in a 30-year-old female with pigmented lesion in close contact with amalgam restorations. They also state that the lesion considerably regressed after replacement of the amalgam restoration with posterior composites. Interestingly, these authors clearly confirmed that hypersensitivity to amalgam might be attributed to mercury in amalgam, but they did not rule out the significant role of exposure to common sources of electromagnetic fields (e.g. Wi-Fi, mobile phones and mobile base stations) in intensifying the release of mercury from dental amalgam restorations. Over the past years, our laboratory has focused on studying the health effects of exposure to some common and/or occupational sources of electromagnetic fields such as mobile phones and their base stations, mobile phone jammers, laptop computers, radars, dentistry cavitrons, Helmholtz coils and magnetic resonance imaging (MRI). Our first report on the role of exposure to MRI or microwave radiation emitted by mobile phones in enhancing the release of mercury from dental amalgam restoration was published in 2008.<sup>[1]</sup> Furthermore, we have recently studied the effects of stronger magnetic fields (1.5 T in our recent study vs. 0.25 T in our previous report) and provided further support for the adverse effect of MRI in increasing the release of mercury from dental amalgam fillings.<sup>[2]</sup> It is worth mentioning that results obtained in studies performed on the role of exposure to electromagnetic fields in MRI on the microleakage of amalgam are strongly in line with our findings.<sup>[3,4]</sup> Although our studies revealed a significant increase in mercury level after MRI, we highlighted the issue of hypersensitive individuals “Although some researchers believe that no conclusive evidence exists to indicate that dental amalgams cause health problems in the majority of the population, the effects of dental amalgam on specific

groups, including pregnant women, small children, elderly and people who are especially sensitive to mercury, might be different.”<sup>[2]</sup> We have also shown that a few published papers which reported no increased release of mercury after MRI, may have some methodological flaws.<sup>[5]</sup>

Therefore, we would like to strongly stress this point that the role of rapidly increasing exposure to different sources of electromagnetic fields (e.g. Wi-Fi, mobile phones, mobile base stations) in increasing mercury release from dental amalgam restorations should be clearly investigated in hypersensitive patients such as the case reported in Kristin’s study. We hope that these comments will be useful in obtaining more credible results in the future.

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