# Report on a workshop on Mercury-Free Dentistry

December 22, 2019 Ahmedabad, Gujarat

Working towards a mercury free world

Organized by Toxics Link





Toxics Link organized a workshop on 'Mercury-Free Dentistry' to discuss the ways to eliminate silver amalgam and the barrier the dentists face in practicing Mercury free dentistry. This was done in association with Indian Dental Association, Gujarat. It was attended by different stakeholders from medical institutions, consumer education and research centre, dental clinics. While setting the stage, Ms Priti Mahesh, Chief Progamme Coordinator, Toxics Link, highlighted Toxics Link's engagements and campaign on Mercury Free Dentistry for last two decades.

**Dr. Viral Patel, President, Gujarat State Dental Council and Chairman-CDE, Indian Dental Association, Ahmedabad,** welcomed the participants and stated his commitment to work towards mercury free dentistry. He also shared that many dentists in Gujarat were moving towards being mercury free.

**Mr. Satish Sinha, Associate Director, Toxics Link** appreciated the strides made by dentists in Gujarat to phase out mercury, but pointed out the big difference in practices of using mercury amalgam between the urban and rural parts of the country. In most of the rural areas, Mercury is still widely used, owing to the economic condition, training and other aspects. And considering that, mercury is still used in large quantities in dentistry in India.



While presenting the current scenario, he mentioned that 212,917 dentists are currently registered in India and around 30,000 dental students graduate every year. So the constituency is large and growing. If mercury continues to be used, it can be a big health and environment concern. He then reiterated the concerns related to Mercury, the most toxic element known to human beings. Mercury is a global pollutant and can biomagnify. He also mentioned that pregnant women, unborn children and fetus are the most

vulnerable. He further mentioned that according to WHO, silver amalgam, globally, accounts to about 21 % of the total mercury emission. It is known to be released in placement, replacement and removal of dental amalgam.

Giving a background on the Minamata Convention, he said that it has been 20 years since the world started talking about mercury. There is sufficient evidence of mercury toxicity and hence UNEP came up with a globally binding instrument, Minamata Treaty. The treaty addresses both the supply and demand side. The treaty mandates closure off all the Mercury mines and hence stopping the supply of mercury in the market. On the demand side, the treaty lists out usages of mercury with phaseout or phase down dates. Mercury Amalgam, though not yet in phaseout list, is to be phased down. India signed the treaty and ratified in the year 2018.



While talking on 'Occupational safety of the dentists and the dental auxiliaries'; **Dr. Pradeep Jain, Senior Dentist from Indore,** mentioned that mercury has attracted many environmental

chemists to study and to work upon because of its toxic potential. He said that Mercury should not be used in dental profession or anywhere else. While elaborating, he informed that organic form is the most potent and 80% of the mercury reached the body through inhalation. In a dental clinic where mercury is used, the exposure is mainly through touch and inhalation. He further highlighted the significance of mercury-safe dentistry. But many of these alternatives need precision and proper training. The reasons



behind popularity of silver amalgam are its low cost solution, ease of applications and durability. But considering its toxicity, it should be completely avoided for children aged below 14 and pregnant women.

Dentists and dental staffs are generally unaware of its occupational risk; there is risk of occupational exposure to everyone working in dental clinics- be it the doctors, patients, nurses or any support staff. He also suggested to avoid dry polishing and the dry removal of amalgam restoration and highlighted some measures like the dental clinics must be properly ventilated, the working area should be designed in a way that spillage can be confined; mercury should be collected and disposed properly. Carpet shouldn't be used in the clinics. He informed that 96% of the mercury spills is due to the mishandling. He also explained the spill clean-up in case of accidental spillage or mercury.

**Dr. Kamal Bagda, an eminent dentist from Ahmedabad** took the stage to share his views on 'Challenges, advantages, disadvantages of mercury free dentistry'. He cautioned that mercury can be inhaled and go through the nervous system, liver and kidney. In the severe condition, it can also lead to death. The highest release of Mercury is in dry polishing. So, we should avoid dry polishing and adopt wet polishing. Mercury causes allergies of many kinds. Immediate reactions can be as severe burning, itching, skin patches, difficulty in breathing etc.

### **Question-Answer/Discussion:**

A query was raised regarding consumer safety and if the patients were informed about the Mercury toxicity and its harm. The panel, consisting of Mr. Satish Sinha, Dr. Pradeep Jain and Dr. Kamal Bagda shared that as per the regulations from the Government of India, everything, which includes the process of treatment and post-complications of treatment, should be



informed to the patients before they start the treatment. But usually mercury toxicity is not explained.

While moving ahead with the discussions, the students raised the concern that they are being trained more on amalgam fillings than the alternatives. They also suggested change of curriculum, with more focus and practical training on alternatives.

Further discussions were help on need for consumer awareness to reduce the demand of silver amalgam and also focus on the health risks to women who are the most vulnerable population and also female dentists and the dental students who are exposed to mercury every day. Concern was raised for rural areas, where often dental services are provided by assistants who have no knowledge on the toxicity.

The panel also brought out the fact that internationally stringent standards are followed for mercury in fish, owing to the high level of mercury in certain fish variety. In India we do not have a framework for this, but is much needed as there is a large fish eating population.

The Panel vowed to work toward mercury free dentistry and IDA, Gujarat committed to create more awareness among its members. Dr. Viral Patel also asserted that he will try for an advisory to phase out mercury amalgam to be issued by the GDA. Dr. Patel also promised to take up the issue of curriculum with India Dental Association. The panel as well as the participants unanimously agreed that a strong message for mercury free dentistry should be circulated to the dental colleges, the state level dental councils and the common people.





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