ABSTRACT

**Background.** Restorative materials are widely used in dentistry, and broadly divided into rigid and plastic dental restorative material. One of base material from restoration rigid is chromium (Cr), which are carcinogenic. Workers are often in contact with chromium at high risk for exposure; one of them is dental technician. Based on preliminary research in one of dental laboratory in Surabaya, showed that dental technician who working for 20 years have the blood levels of chromium are higher from threshold limit value (TLV). **Aims.** To know the concentration of heavy metal chromium in the dental technicians’ blood due to exposure of vapor and particles from chromium in the laboratories’ workplace. **Methods.** Respondents whose has been determined to be sampled in this study signed the informed consent. Blood samples were taken 3 ml intravenously using a vacuum tube that has been given anticoagulants are equipped with disposable needle. Then blood samples were put into cold storage and the chromium’s levels checked at the Balai Besar Laboratorium Kesihatan. After that, interviews with respondents using questionnaires. **Results.** From the 13 sampled dental technician research, there was eight of them have the blood levels of chromium are higher from TLV. **Conclusions.** Results indicate the exposure affects to the high levels of chromium in the dental technicians’ blood, especially in those who have a work period more than five years and worked more than five restorative materials each day.

**Keywords:** chromium, blood, dental technician