



Xylene toxicity in occupationally exposed workers

Sharada T Rajan

Sri Ramachandra Institute of Higher Education and Research, India

Abstract:

Background: Xylene, an aromatic hydrocarbon is a solvent that is found a wide use in industrial and medical laboratories. Very few ill-effects of xylene have so far been documented in medical literature. Certain workers have been found to have the greatest potential for occupational exposure to high concentrations of xylene including histopathology technicians and painters. This study was undertaken to determine the level of xylene exposed by these two work forces. Systemic health effects among these groups have also been evaluated with reference to xylene exposure.

Methods: Mid-week end of shift urine samples of the subjects was collected and quantified for methyl hippuric acid (MHA) which is an established biomarker of xylene using High Performance Liquid Chromatography (HPLC).

Findings: Statistical analysis of the excreted metabolite in correlation with the work hours per week of the occupationally exposed subjects was found to be highly significant. Several health effects of Xylene such as respiratory, dermatological, neurological and gastrointestinal symptoms were observed among the study subjects.

Significance: Periodic biological monitoring of the workers' body fluids to detect if xylene exposure is within limits is recommended as their health and safety is of utmost importance. Personnel who work with such compounds need to be educated of the various health effects of xylene and advised of ways to reduce its occupational exposure.



Biography:

Sharada T Rajan completed her Undergraduate degree in Dentistry and Masters in Oral Pathology and Microbiology from Faculty of Dental Sciences, SRIHER and is currently working as an Associate Professor in her alma mater. She is pursuing her doctorate in cancer therapeutics. A passionate researcher with a medical expertise on exfoliative cytology and histopathology related to maxillofacial region.

Publication of speakers:

1. Sharada.T.Rajan, Malathi N. Health hazards of xylene: A literature review. JCDR, 2014 Feb, 8(2): 271-274.
2. Sharada.T.Rajan, Malathi N. Safety measures and prudent practices in histopathological laboratory in Dental Sciences SRJM, 2012, Jan-June issue; 30-35
3. Sangeetha N, Ramkumar S, Malathi N, Thamizhchelvan H, Sharada.T.Rajan. Lymphangioma of the maxillary sinus- A rare case report. OMPJ, July- Dec 2013; 4(2): 372-375.

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