History of Occupational Contact Dermatitis among Paint workers

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Abstract

Background: Paints are chemical products, which consists of resins, additives, solvents, and pigments. Exposure to paints can cause Occupational Contact Dermatitis (OCD) thus affects workers' productivity and working performance.

Objective: To describe the history of paints and Occupational Contact dermatitis among paint workers.

Methodology: Retrospective cohort study was conducted; data was obtained from literature review based on Occupational history of paint and Occupational Contact Dermatitis among paint workers from ancient times to present.

Results: During 1700s paints production began in Europe and United States further production demands arose after Second World War. Paints composition have been changing with time, currently solvent based paints have been replaced with water based paints which require more preservative than the predecessors thus increase risk of Occupational Contact Dermatitis in paint workers.

In 1960s benzisothiazolinone (BIT) was introduced in paint industry as a preservative which resulted in OCD case of 2 paint workers and the report was published in 1976, BIT was justified by Danish as an important allergen to painters. In 1980s Isothiazolinone preservative and its derivates (methylchloroisothiazolinone (MCI), methylisothiazolinone (MI), (BIT), and octylisothiazolinone (OIT)) were highly used and OCD cases increased. Also in 1982 first 2 cases due to OIT usage was published among workers. In early 2000s, MI was introduced as a preservative in industrial products where the first cases was reported by Isaksson due to exposure to paint. In 2013 MI was named as contact allergen of the Year by American Contact Dermatitis Society. Exposure of MCI/MI had increased more than 6 times OCD cases among workers from period of 2008 to 2015.

Due to contact of different allergen and irritants paint workers were at risk. In 2013 in United States an estimates of 13 million workers are exposed to chemicals each year and at risk for developing OCD.

Conclusion: Excessive usage of chemicals in paint industry has increased OCD cases among paint workers over the history.