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OCCUPATIONAL EXPOSURE ON HAND ECZEMA

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This report discusses the occupational impact on hand eczema. Manifested with dry, itchy skin associated with swelling and redness, hand eczema is most commonly seen on the palms of the hand even though it can be seen in other parts of the hand as well. With an epidemiological incidence of 2%-10% in adults its etiology incudes genetic and environmental causes with work-related disorders being the most widespread cause. The impairment of the epidermal barrier function due to exogenous factors such as skin irritants and endogenous factors such as atopic predisposition supports the pathogenesis of the disease. While patients with a history of atopic dermatitis are at a higher risk to contact the disease it is not uncommon for people who use gloves, perform handwashing multiple times a day and use a variety of skin irritants to be at risk including healthcare workers, hairdressers, florists etc...

Increased frequency of water usage, due to its pH, minerality and increased temperature leads to the shrinkage of the stratum corneum which leads to hand eczema. Allergic contact dermatitis which is a sub type of hand eczema is caused due to the usage of gloves and glove powder owing to a chemical used to process synthetic, nitrile and latex gloves. Odense University found that 47% out of 242 surgeons and nurses who took the questionnaire had developed hand eczema as a result of constant glove use and hand washing. Statistical data shows that women are at a higher risk of contracting the disease due to household activities that require the use of water and professional activities including nursing and hairdressing compared to their male counterparts.

The main treatment of hand eczema is using preventative measures especially for exogenous types. However topical corticosteroids with anti-inflammatory, antipruritic and moisturizing properties is the most common treatment if preventative measures fail. Calcineurin antagonists such as Tacrolimus and Pimecrolimus which are topical immune modulators inhibit the transcription of inflammatory cytokines released from T cells and mast cells and blocking calcineurin phosphatase activity thereby causing a decrease in inflammation. For long term treatment cyclosporine can be used even though it is effective against only atopic hand dermatitis, UV protection is recommended along with its use as there is an increases risk for skin cancer. A modern alternative for topical treatment is JAK inhibitors due to its good bioavailability and tolerance. Conventional superficial x-ray therapy in combination with topical treatment has shown significantly better therapeutic results in modern medicine approaches

It can be concluded that with a higher frequency of wet-work exposure the incidence of the disease is also higher thereby establishing a direct proportionality between the two variables.