Letters to the Editor

Allergic Reactions to Latex Gloves

To the Editor:

Regarding the brief article on allergic reactions to latex gloves that appeared in the August "Medical News," I would offer two comments. First, the statement about the seriousness of this situation would appear to be relatively conservative. I recently have had conversations with Dr. Lorin Charous who, with his associate Dr. Kevin Kelly, has done considerable work on this latex sensitivity problem. Dr. Charous, having gained some national prominence as a consequence of this work, has acquired significant case studies of these types of reactions in their most severe form-anaphylactic shock. In at least one case, the patient was so sensitive that the simple act of placing the needle into a rubber-type stopper or diaphragm picked up enough of the material to create a very severe reaction. We are exploring some research potentials with Dr. Charous in the hopes that perhaps the Derma Shield barrier product will provide a method of excluding the offending antigen from reaching the target calls.

Second, I believe that some confusing signals as to the etiology of the contact dermatitis have been received. Although I believe most manufacturers have gone to irradiation for sterilization purposes, historically, ethylene oxide also has been used as a sterilant. I have found several cases of individuals who have had a reaction not to the glove but to a breakdown product of the sterilant. When ethylene oxide is used, small amounts of it may be absorbed into the surface of the powders used in gloves. Once the glove is in place and normal perspiration occurs, the presence in a liquid form (i.e., perspiration) of the chloride ion is sufficient to cause the residual ethylene oxide to break down to ethylene chlorhydrin (Figure). The ethylene chlorhydrin appears to have an extremely toxic effect on some individuals'hands, causing the contact-dermatitis-type reaction.

In the past, when I have had reports of glove allergies, particularly those associated with the so-called hyperallergenic gloves, I've always attempted to rule out ethylene oxide as a sterilant.

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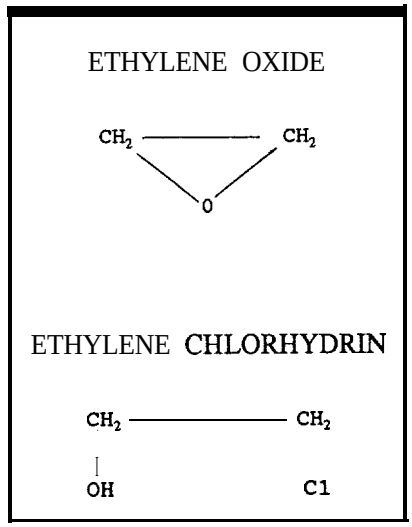


FIGURE. Once the glove is in place and normal perspiration occurs, the presence in a liquid form (i.e., perspiration) of the chloride ion is sufficient to cause the residual ethylene oxide to break down to ethylene chlorhydrin.

Corrections

In the article by N.J. Ehrenkranz (May 1992;13:299-301), on page 300 in the text, reference 4 should be reference 5, reference 5 should be reference 6, and reference 6 should be reference 7.

"SHEA's Initiative for Confronting the Cost-Quality Conundrum" (June 1992;13:354-356) should have been labeled a Special Article instead of a SHEA Position Paper. At the January 1992 Board Meeting, the Board did vote on specific actions with regard to quality issues, but they do not constitute an official position of the Society for Hospital Epidemiology of America, Inc.

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