

BRIEF REPORT

Pediatric Dermatology Vol. 31 No. 2 e60, 2014

Underwire Brassieres Are a Source of Nickel Exposure

Abstract: Underwire brassieres with metal rim supports are a potential source of nickel exposure to consider. Awareness and avoidance of such may also help prevent nickel sensitization.

Piercings with nickel-releasing jewelry have long been considered a major exposure source for sensitization in children and women (1). Other reported sources of nickel include eyeglass frames, belt buckles, jeans snaps, buttons, keys, cellular telephones, and coins (2). Attention is called to the underwire brassiere rim support wires as another possible source of significant nickel exposure that clinicians should be aware of. It appears that the combination of friction and sweat may encourage the leaching of nickel from the underwire and potentially enhance contact allergy.

Recently a 14-year-old girl was evaluated for a 1-year history of eczematous plaques on her arms, legs, and trunk. On physical evaluation she was also noted to have plaques in the infraumbilical area and inframammary folds (Fig. 1). Patch testing demonstrated a 1+ reaction to nickel. Several of her brassieres were disassembled and the underwires removed. Some of the wires were found to contain nickel on dimethylglyoxime testing and others were noted to have plastic underwires. The patient was instructed to avoid nickel, including underwires, and her dermatitis significantly improved.

This case highlights the need to consider brassieres as a potential source of exposure when identifying allergy to nickel. Patients with this sensitivity should



Figure 1. Nickel-associated brassiere underwire dermatitis.

consider choosing plastic “wires.” The type of wire can be identified while it is still in the bra by bending it. Wires containing metal remain bent when released, whereas those made from plastic snap back. This easy test can help distinguish which underwire brassieres are a safer plastic alternative in patients desiring the support of an underwire in lieu of disassembling the brassiere.

REFERENCES

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