Allergic contact dermatitis to triclosan-coated suture material

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We present a case of presumed allergic contact dermatitis (ACD) to triclosan-coated Vicryl Plus and Monocryl Plus suture material causing breakdown of an abdominal wound.

Case report

A 53-year-old theatre nurse presented to our patch testing clinic. She had a history of atopy, with asthma, atopic dermatitis and allergic rhinitis since childhood. She had a complex medical history including endometriosis with bowel adhesions, and ruptured Achilles and hamstring tendons. She had previously tolerated tendon repairs using nylon and silk sutures, however when she had a breast reduction using triclosan-coated Monocryl Plus sutures, she developed redness and swelling at the surgical site.

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She recently underwent an abdominal hysterectomy using triclosan-coated Vicryl Plus and Monocryl Plus sutures. Within 24 hours of surgery she developed redness and swelling at the surgical site, which progressed to breakdown of the wound. She was re-hospitalised for 8 weeks, underwent suture removal and multiple vacuum dressing changes under general anaesthesia. She subsequently developed a large abdominal hernia which still requires repair. Patch testing revealed a positive reaction to triclosan 2% pet., and she was diagnosed with ACD to triclosan-coated sutures.

Discussion

Triclosan is an antimicrobial agent which is commonly used in Australia in many personal care products, cleaning agents and in the healthcare setting¹. It is a known irritant to the skin, eyes and respiratory tract in humans¹. As a result of its widespread use, it has become ubiquitous in the environment and has been banned in the United States by the Food and Drug Administration (FDA) for use in household products because of concerns about antimicrobial resistance².

Triclosan-coated absorbable sutures were first approved for use by the FDA in 2002 to reduce the risk of surgical site infection³. Available varieties of triclosan-coated suture material include Vicryl Plus, Monocryl Plus and PDS Plus Antibacterial sutures³. A recent systematic review and meta-analysis concluded that triclosan-coated sutures were effective in reducing surgical site infections⁴. The World Health Organization (WHO) and Centers for Disease Control and Prevention (CDC) guidelines for the prevention of surgical site infection recommend the use of triclosan-coated sutures, based on low-to-moderate quality evidence^{5,6}.

Triclosan has a low sensitising potential and ACD is uncommon. In a retrospective analysis of 113162 patients patch tested with triclosan 2% pet., a positive reaction was observed in only 363 (0.32%) of patients, however 54% of positive reactions were considered clinically relevant⁷. A review of the English-language literature revealed one case report of a delayed-type allergic reaction to triclosan-coated suture material⁸. Our experience suggests that practitioners should consider the rare possibility of ACD to triclosan-coated suture material, in the setting of a post-operative skin reaction.

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