

A Technique for Identifying Vicryl Suture Hypersensitivity

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PRECÍS

Vicryl hypersensitivity is rare but increasing, although no accepted technique for patch testing exists. We report the successful use of a single interrupted stitch for testing.

DISCUSSION

Polyglactin 910 (Vicryl) (Ethicon, Somerville, NJ), a commonly used absorbable suture for the deep and superficial closures of surgical wounds, is known to have very low tissue reactivity.¹ This suture is preferred among clinicians due to the low antigenicity and sparse inflammatory infiltrate.² Recently, few case reports have suggested an increasing incidence of Vicryl hypersensitivity.^{2,3} However, there have been no reports to date of testing methods for Vicryl sutures.

Here, we report a case of a 43-year-old woman who was referred for patch testing after developing facial swelling after a dental procedure where Vicryl was used. Her allergic history was positive for hay fever and mild asthma. The patient reported prior reactions around wound closures for procedures where Vicryl was used. Reactions included pruritus, edema, pain, and seroma formation. As there was concern that a metal or surgical material used in the dental procedure caused the hypersensitivity, patch testing with Chemotechnique Metal Series (Chemotechnique Diagnostics, Vellinge, Sweden), North American Standard Series, Plant Series, and Cosmetic Series was performed. In addition, a single interrupted Vicryl suture was placed in the patient's lower back. The Vicryl suture was positive (+) with edema, pain, and pruritus at 48 and 72 hours (Fig. 1). The patient believed that the symptoms were the same as her prior reactions.

Although there have been an increased number of reports of Vicryl hypersensitivity, there is no standardized method to

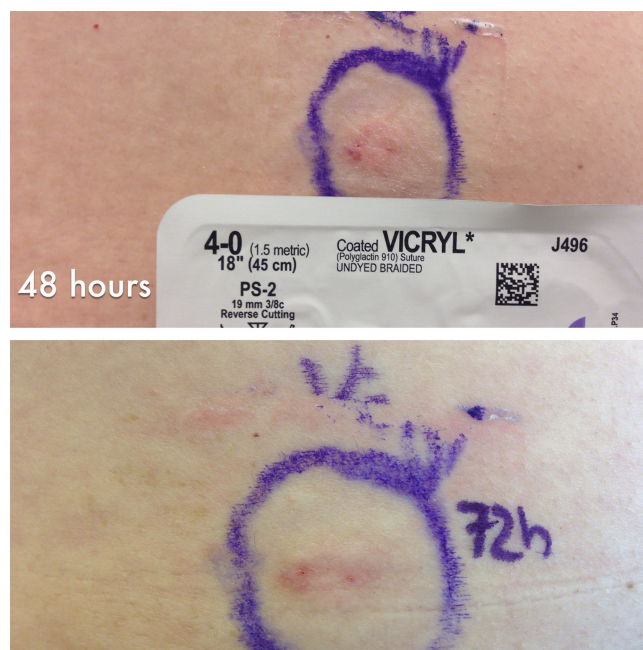


Figure 1. Patch testing to Vicryl sutures. Grade 1+ edema and erythema 48 and 72 hours after placement of a simple interrupted Vicryl suture.

test this reaction in the literature. Typically, Vicryl sutures are absorbed within 60 to 90 days through hydrolysis and enzymatic degradation. A usual reaction involves a minimal multicellular inflammatory infiltrate with neutrophils, eosinophils, fibroblasts, microphages, and giant cells.⁴ Vicryl hypersensitivity has been reportedly associated with other materials, such as tuberculin test and Dermabond glue.^{2,3} However, in these cases, formal patch testing to confirm the allergen was not conducted.

Because many materials used in surgical procedures can also incite a tissue reaction, it is necessary to identify true hypersensitivities to Vicryl. A prior report on delayed hypersensitivity to Prolene (Ethicon) successfully conducted patch testing with sutures, although the method of application was not reported.⁵ Establishing a technique for testing Vicryl sutures is more relevant with the increasing reports of hypersensitivity.

Placement of a single interrupted suture exposes the material to the dermis, where the suture is commonly placed, allowing for a reaction to occur. We suggest this method for testing suture allergy, beyond the standard epidermal “as is” application of sutures.

CONCLUDING PEARL

Placement of single interrupted sutures should be considered as in evaluation of suture hypersensitivity.

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