

and myalgia. At the end of doxycycline treatment for seven days, he was asymptomatic and with no cutaneous lesions. We repeated serology tests for spotted fever 30 days later, observing a drop in titration and negative results for the three antibodies: anti-Proteus OX-2 (less than 1/20), anti-Proteus OX-19 (1/80), and anti-Proteus OX-K (less than 1/80).

Spotted fever is a rickettsial disease that manifests itself as an acute, febrile infectious disease of varying severity.<sup>1,2</sup> Human rickettsial diseases already described in Brazil can be classified into three groups: classical, atypical, and new or recently described. Classical rickettsioses common symptoms include high fever with sudden onset and frequent exanthema. Atypical rickettsioses feature a poorly defined clinical picture and may go unnoticed, without clinical or laboratory diagnosis. The third group, new rickettsiosis, includes vesicular rickettsial infection (rickettsialpox), Debonel/Tibola, perimiocarditis, and rickettsia felis.<sup>3</sup>

Its diagnosis can be considered a challenge because many physicians are not familiar with the nonspecific symptoms of the early stages of the disease. The Weil-Felix method is easy to implement and inexpensive. The reaction detects antibodies in the serum of patients, which react with different strains or species of Proteus. Each species has antigenic epitopes similar to the lipopolysaccharides of the rickettsia membranes of the different groups. Its positivity indicates only the presence of an infection caused by rickettsia. The gold standard for the diagnosis of rickettsial disease is indirect immunofluorescence, which uses species-specific rickettsia antigens.<sup>4,5</sup>

This report may represent a description of a rickettsial disease not observed in Brazil to date: vesicular rickettsial disease. Characterized as a benign disease that manifests itself about a week after the bite of a parasitic mite of the mouse *Mus musculus*, the disease reveals a reddish and painless papule at the inoculation site, which becomes vesicular, associated with sudden fever with tremors, accompanied or not by vesicular exanthema similar to that of varicella.<sup>1,3,4</sup>

Perceptions of the importance of diseases caused by rickettsia in public health has been increasing. Its early diagnosis is fundamental and decisive to avoid therapy delays. The authors emphasize that clinical evaluation is still the fastest and most precious diagnostic methods and highlight the importance of a dermatologist in the hospital environment. □

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**How to cite this article:** Santos FSD, Mantovam CCA, Duarte RD, Oliveira AML, Bernardes Filho F. Rickettsial diseases in Brazil: report of a case with varicella-like skin lesions. *An Bras Dermatol*. 2017;92(5):746-8.

## Treatment of reaction to red tattoo ink with intralesional triamcinolone\*

DOI: <http://dx.doi.org/10.1590/abd1806-4841.20176678>

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Dear Editor,

Body tattoos are becoming increasingly popular. A national survey revealed that approximately a quarter of American adults aged between 18 and 50 years had tattoos.<sup>1</sup> Dermatologists worldwide are requested for tattoo removal, counseling, and treatment for tattoo reactions. No consistently effective treatment for tattoo reactions has been reported to date.<sup>2</sup> If the tattoo reaction area is small, surgical excision, 10,600-nm CO<sub>2</sub> laser, cryosurgery, or radiofrequency ablation may be performed. However, in cases of multiple tattoos or large surface area with reaction, or ablation over the lower extremities, the risk of suboptimal scar development is high. A

Received on 02.11.2016.

Approved by the Advisory Board and accepted for publication on 20.02.2017.

\* Work performed at the Department of Medicine, Universidade Estadual de Ponta Grossa (UEPG) and Department of Dermatology, Mayo Clinic – Jacksonville (FL), USA.

Financial support: None.

Conflict of interest: None.

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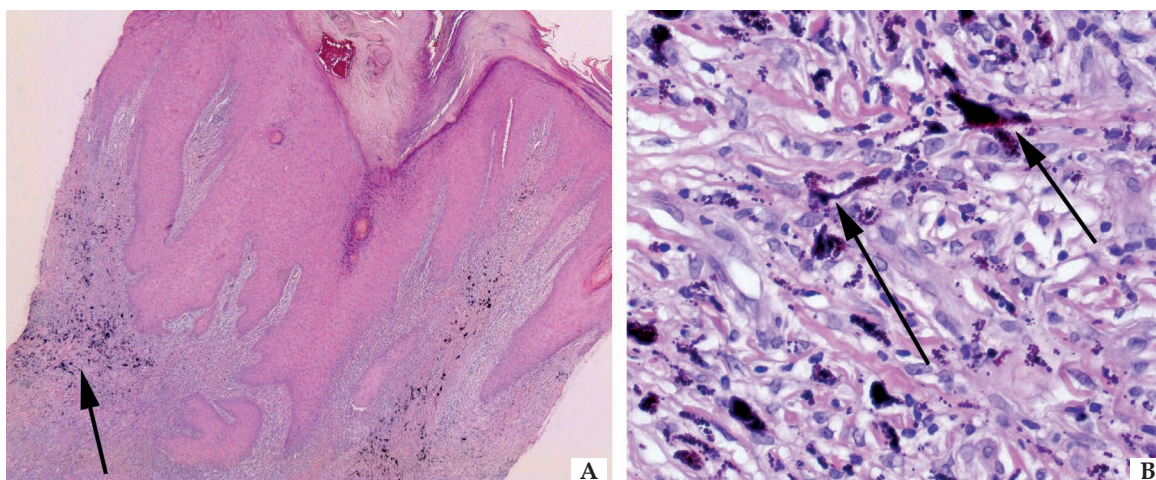
35-year-old woman presented with extremely pruritic nodules on the right leg, ankle, foot, and posterior trunk over tattoos for more than nine months (**Figure 1**). She was an otherwise healthy patient with Fitzpatrick skin type III, without peripheral lymphadenopathy. She presented normal blood count and negative serologic tests for HIV and hepatitis B and C. She had been prescribed hydroxyzine 25mg three times a day, topical clobetasol ointment .05% three times a day for a month, and fludrocortide 4mcg/cm<sup>2</sup> tape, without resolution of symptoms or involution of the nodules.

A deep skin punch biopsy was taken from the most pruritic site of the right ankle. Pathology review showed marked epidermal hyperplasia with dermal fibrosis and chronic, lymphoplasmacytic inflammatory infiltrate around ink deposits. Keloid, lymphomatoid reaction, and atypical mycobacterial and fungal infections were ruled out (**Figure 2**).

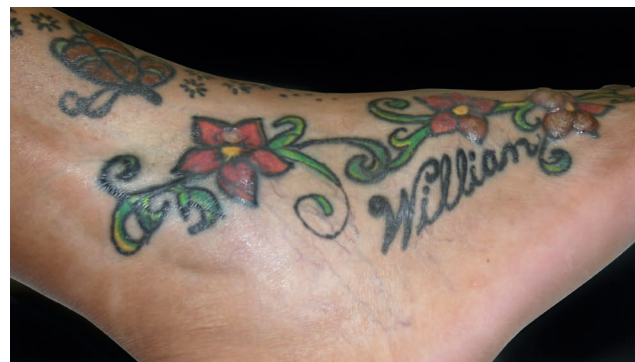
Despite the use of topical steroids for weeks, as seen in **Figure 1**, color could barely be seen through the thick acanthosis. Therefore, frequency-doubled Q-switched 532 nm neodymium-doped yt-



**FIGURE 1:** Tattoo hypersensitivity reaction. Exuberant verrucous nodules caused by red tattoo ink on the right ankle. These nodules were extremely pruritic revealing excoriations and moderate lichenification of the surrounding skin



**FIGURE 2:** Tattoo hypersensitivity reaction. Photomicrographs. **A.** Scanning magnification reveals a marked epidermal hyperplasia, papillomatosis, and hyperkeratosis, with intense dermal chronic inflammatory infiltrate, black and dark red pigmented deposits and moderate fibrosis (Hematoxylin & eosin; original magnification X40). **B.** Higher magnification shows details of the pigmented deposits, lymphoplasmacytic infiltrate, and fibrosis (Hematoxylin & eosin; original magnification X200). The arrows point out detected areas of dark red ink deposition



**FIGURE 3:** Tattoo hypersensitivity reaction. One-month follow-up. Improvement of pruritus and involution of verrucous nodules on the ankle. Collateral effects: mild atrophy and telangiectasia was evident on adjacent areas after improvement of pruritus and lichenification

trium aluminum garnet (Nd:YAG) laser would not penetrate deep enough through the hyperkeratosis to produce the desired effect on the red ink.

The chosen therapy was intralesional triamcinolone acetate injections 40 mg/ml (maximum volume of 1ml per monthly session). Three treatment sessions were required for total resolution. The injected lesions showed a rapid involution of the nodules and symptoms, and the vivid red color reappeared after the first treatment session (**Figure 3**).

Red pigments are the most common cause of delayed hypersensitivity reactions in tattoos.<sup>2-4</sup> Our patient has been in remission for five years. Although intralesional steroid therapy is a simple technique, collateral effects are to be expected at a high dosage, such as epidermal and dermal atrophy, and telangiectasia. Cases of linear atrophy have already been described suggesting lymphatic spread of injected triamcinolone.<sup>5</sup> Since this treatment modality is still investigational, future studies are needed to establish its efficacy, with different concentrations, and relapse rates. Although this

case required no further treatments, alternative treatments could be possible – but not preserving the cosmetic integrity of the tattoo – such as excision, cryosurgery, electrosurgery, Q-switched 532nm laser, or laser ablation. Tattoo reactions may be a contraindication for laser treatment as the treatment can boost systemic hypersensitivity.

#### ACKNOWLEDGEMENT

The authors are grateful to Dr. Catarina Shaletich for giving the pathological diagnosis and providing us with the photomicrographs. □

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**How to cite this article:** Wambier CG, Cappel MA, Wambier SPF. Treatment of reaction to red ink tattoo with intralesional triamcinolone. *An Bras Dermatol.* 2017;92(5):748-50.

*An Bras Dermatol.* 2017;92(5):740-50.