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Localized hypertrichosis after infectious rash in adults

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**Key words:** Hypertrichosis; infection.

**INTRODUCTION**
Localized excess hair growth or hypertrichosis has been associated with several factors, including repeated skin trauma, periphery of burns, and insect bites. Review of English-language literature from the last 50 years found only one report of localized hypertrichosis after infectious rash (HAIR) in an infant with recent chicken pox. Here I report the cases of 2 adults with a diagnosis of skin and soft tissue infection (SSTI) who subsequently had localized HAIR in the previously affected area.

**CASE REPORTS**
Localized HAIR was defined as excessive growth of hair in a circumscribed area of skin previously involved with an infection. Both patients reported here were evaluated and treated by an infectious disease physician at a community teaching hospital in St. Louis, Missouri.

**Patient A**
A 45-year-old woman recently hospitalized for hypertensive urgency was readmitted with fever, chills, and an infected left forearm, which was the site of an intravenous catheter placed during the previous hospitalization. Cultures of blood and drainage from the site grew methicillin-resistant *Staphylococcus aureus*. She underwent parenteral antibiotic therapy and surgical resection of the infected vein segment after the diagnosis of septic thrombophlebitis; the wound was left open and allowed to close secondarily over the ensuing several weeks. At a 2-month follow-up visit, the site of previous septic thrombophlebitis and venous resection had healed completely, but the patient complained of unsightly hair growth in the previously infected area. She denied recent application of any topical agents on the affected area or changes in the appearance of her hair elsewhere. Physical examination of the forearm found coarse thick terminal hair, appearing the same color as the hair in the uninvolved areas (Fig 1). There was no evidence of follicular or spinous plugs, papules, or splitting of the hair shafts. Because of its benign appearance, the patient was reassured, and no further workup was recommended.

**Patient B**
A 48-year-old man with history of coronary artery bypass graft with right lower extremity venous saphenectomy, congestive heart failure, and sleep apnea presented with acute onset of fever, chills, and severe right lower extremity cellulitis requiring several days of inpatient parenteral antibiotic therapy. He gradually improved and was discharged on oral antibiotics for a minimum of another week of therapy. At a 2-month follow-up visit, there were no signs of infection, but the patient was concerned about new growth of unusually thick and long hair in the same distribution as his recent cellulitis; he reported no changes in the appearance of his hair elsewhere. He denied recent application of any topical agents on the affected leg. Physical examination of the leg found coarse thick terminal hair, the same color as his hair in the uninvolved areas, without evidence of splitting of the hair shafts.
Local hypertrichosis has been reported after a variety of insults to the skin, including repeated irritation, friction, periphery of burns, excoriated insect bites, and intermittent pressure as reported on the shoulders of sack bearers. The condition has also been associated with certain vaccines, including smallpox, Bacillus Calmette-Guérin, tetanus, and diphtheria. Single case reports of localized hypertrichosis associated with underlying osteomyelitis of tibia, gonococcal arthritis, and childhood chickenpox were reported several decades ago (1956, 1934, and 1972, respectively). The 2 cases reported here involve localized HAIR caused by bacterial SSTIs unrelated to vaccination or underlying bone or joint infection. Both patients required hospitalization and an infectious disease consultation, likely reflective of the severity of their infectious process. Given the frequency of SSTIs among hospitalized patients, the incidence of localized HAIR is likely to be much higher than appreciated. Subsequent to the aforementioned observations, 3 other patients hospitalized for severe SSTIs involving various areas of their body (1 leg, 1 finger, and 1 elbow) had localized HAIR diagnosed by the author. As such, recognition of localized hypertrichosis on physical examination should prompt further questioning regarding recent infectious and noninfectious insults to the skin in the area involved.

Although heat and hyperemia are postulated to serve as growth stimulants for the hair follicle, the exact pathophysiology of localized hypertrichosis is unclear. Of interest, transient vanilloid receptor—1 found in human hair follicles and stimulated by heat and inflammation has been implicated in hair growth in mice by inducing anagen in telogen hair follicles in vivo. It is possible that the sustained inflammatory process associated with more severe SSTIs (serving as the initial insult in our patients) may be more likely associated with protracted stimulation of transient vanilloid receptor—1 receptors and subsequent hair growth, although this hypothesis remains to be proven. Regardless of its mechanism, based on the published literature involving noninfectious causes of localized hypertrichosis and the cases described here, localized HAIR appears to have no adverse health consequences and should require no further evaluation.

REFERENCES