Eccrine angiomatous hamartoma occurs most frequently on the limbs, but lesions have also occurred elsewhere. The lesions are usually asymptomatic, but pain and hyperhidrosis occur in about 42% and 32% of patients, respectively (1). Infiltration of small nerves among the eccrine glands may be responsible for the pain (8). A local increase in the temperature within the angioma may produce the sweating seen (1). Enlargement typically occurs commensurate with the growth of the patient. However, rapid growth may occur during puberty (9) and pregnancy (6), pointing to some underlying hormonal influence.

The differential diagnoses of eccrine angiomatous hamartoma include eccrine nevus, vascular malformations, tufted angioma, smooth muscle hamartoma, glomus tumor, and blue rubber bleb nevus (1,5). These conditions are differentiated by histologic findings.

Eccrine angiomatous hamartoma is a benign lesion and can be left alone. Surgical excision is curative and is reserved for painful or cosmetically unacceptable lesions (1). Occasionally, the pain may remit spontaneously without treatment after several years (8). Spontaneous regression has not been reported to occur (10). In our patient, 1 year after diagnosis, one of the nodules spontaneously decreased in size, with almost total regression. Thus, a wait-and-see policy may be warranted if lesions are asymptomatic.

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CANDIDA ALBICANS ALLERGENIC EXTRACT INDUCES TOLL-LIKE RECEPTOR EXPRESSION AND INCREASES INTERFERON-α PRODUCTION

To the Editor:

In the past several years, your excellent journal has published a study (1) and a letter to the editor (2) on *Candida* immunotherapy of warts (CI). Since then, CI has become familiar to clinical dermatologists (3). However, its mechanism of action is unclear. We would now like to share with your readers our preliminary findings regarding *Candida* allergenic extract (CAE), Toll-like receptor (TLR) expression, and cytokine expression.

As *C. albicans* infections stimulate innate immunity by distinct pattern recognition receptor activation, including TLR, we hypothesized that CAE could act as an immunomodulator on cells of the innate immune system by signaling through TLR. Using reverse transcriptase-polymerase chain reaction, we found CAE-induced expression of TLR2 and TLR9 in human neutrophils (PMN) and TLR10 in human monocytes (MONO) and increased that of TLR8 in neutrophils and monocytes (Fig. 1). We also found that interferon-α

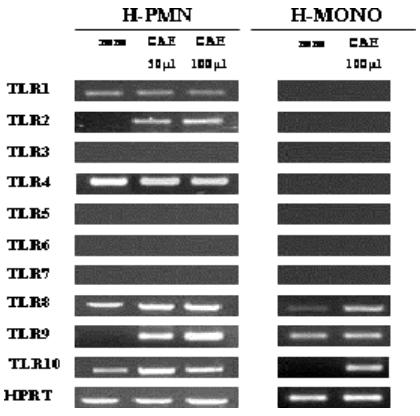

Figure 1. CAE induces TLR expression in human neutrophils and monocytes. Peripheral human PMN and MONO were exposed for 2 h to CAE at different concentrations before assessment of TLR mRNA by RT-PCR. cDNA levels were normalized against the HPRT gene. *None*: cells exposed to diluent alone. The data shown are representative of three experiments ($n = 3$).

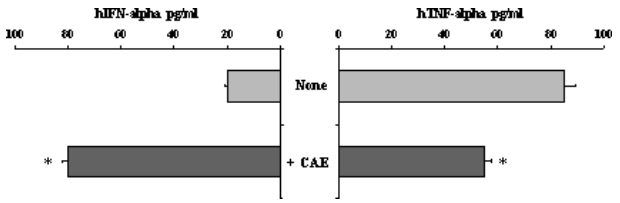

Figure 2. CAE affects IFN-α and TNF-α production by PBL. Cytokines were determined by specific ELISA in culture supernatant of PBL exposed to CAE for 24 h at 37°C. $^*P < 0.05$, Student's *t*-test. CAE-treated cells versus untreated (none). The above represent data from one healthy human subject ($n = 1$).

(IFN-α) production in human peripheral blood leucocytes (PBL) was increased fourfold in response to CAE, whereas tumor necrosis factor-α (TNF-α) production was only slightly reduced (Fig. 2).

We speculate that injection of CAE into warts induces TLR expression, which ultimately leads to upregulation of IFN-α production in the host. We are unaware of any previous reports demonstrating that CAE induces expression of TLR in human neutrophils and monocytes. Nor are we aware of prior reports showing that CAE affects cytokine production in human peripheral blood leucocytes. In vivo studies examining pre-immunotherapy and 2 weeks postinjection skin biopsy specimens from wart patients could be useful in verifying our hypothesis. Finally, the content of this commercial CAE needs to be investigated. *Candida* allergenic extract may contain a number of active compounds, including novel TLR ligands as well as already characterized yeast polypeptides.

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ACUTE GENERALIZED FACIAL ERYTHEMA AND SWELLING ASSOCIATED WITH ORAL ISOTRETINOIN IN A CHILD

To the Editor:

Acute severe facial swelling and erythema following oral isotretinoin therapy are rare, having been previously reported only in three adult male patients with nodulocystic acne (1,2). We describe the first similar occurrence of generalized facial erythema and swelling in a child, which responded to temporary discontinuation of isotretinoin, a short course of oral steroids and antibiotics. Later reintroduction of isotretinoin was tolerated under oral steroid cover.

A 14-year-old boy with severe autism was referred with an 18-month history of acne affecting his face, chest, and back. Previous unsuccessful treatments by his general practitioner included a 6-month course of oral erythromycin in conjunction with topical 10% benzyl peroxide gel. Both his father and mother had a previous history of acne, the latter requiring isotretinoin. On initial examination, the severity of his acne was graded 1 on the face and 3 on the chest and back according to the Leeds acne grading scale (3). Lesions were a mixture of macrocomedones, open comedones, and pustules. Oral doxycycline 100 mg with topical adapalene gel once a day produced little improvement after 9 months. At this stage, he had evidence of nodulocystic acne with macrocomedones, although acne grades were unchanged. Low-dose isotretinoin 20 mg/day (0.3 mg/kg/day) was initiated. After 6 weeks, he developed new red acne nodules on his chin and within 2 days generalized facial redness and swelling. On examination, he had florid diffuse erythema and edema involving the entire face symmetrically, including the lips and periorbital areas. The conjunctivae and sclerae also showed signs of inflammation. Acne lesions on the chest and back showed the same grading. He was systemically well and apyrexial. Isotretinoin was discontinued and he was started on oral prednisolone 30 mg/day (2 mg/kg/day). In addition, a 5-day course of oral flucloxacillin and penicillin V was given as a cover for any bacterial infection. A skin swab taken from the cheek showed moderate growth of *Staphylococcus aureus* and coliform species. Within 3 days, the inflammation dramatically improved and mild erythema remained, with eczematous changes around the eyes. The facial edema completely resolved by the fifth day and prednisolone was slowly reduced and discontinued after 2 weeks. Four weeks later, isotretinoin was restarted at a lower dose of 10 mg/day (0.15 mg/kg/day) with oral prednisolone cover (20 mg/day reducing to stop after a month). Eight weeks later, no further complications were noted and the dose of isotretinoin