

Truncal Rashes Associated With Demodex

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Species of the genus *Demodex* are ubiquitous mites that parasitize the hair follicles and sebaceous glands of mammals.¹ Species infesting humans were first discovered in the 1840s.² Two distinct species, *D folliculorum* and *D brevis* (Figure 1), were described in detail in 1972.³ The adult mites are minute (0.1 to 0.4 mm), and have an elongated, transversely striated opisthosoma (abdomen). Four pairs of stubby, segmented legs are clustered anteriorly. The genitalia are located ventrally between the legs and the opisthosoma. Differentiation between the two species is made by the relative proportions and sizes, the shape of the end of the opisthosoma, and the structure of the pharyngeal bulb and genitalia.

The life cycle of these mites has been described.⁴ The two species inhabit independent ecologic niches: *D folliculorum* is found primarily on the face in the follicular infundibulum and often in groups of a few to 15 or more; *D brevis* is found living in sebaceous glands; they tend to be solitary and are more evenly distributed on the upper body.³⁻⁵ Infestation is uncommon in children and increases at the time of puberty, when sebum production increases. Their prevalence in adults approaches 100 percent.²

The pathogenic potential of these mites has been debated for over 140 years. Standard texts do not generally attribute human disease to these mites.⁶⁻¹⁰ *Demodex* species can cause significant disease in dogs, cattle, and other mammals, however.^{10,11} Their role in possible human disease is generally limited to the head^{1,2}; they have been associated with blepharitis, chalazions, and a "rosacea-like demodicidosis" of the

eyelids.¹²⁻¹⁵ A rosacea-like condition of the face and eruptions on balding scalps have been associated with *Demodex*.¹⁶⁻¹⁸ These conditions often responded to acaricidal therapy. It is even uncommon to recover the mites from sites other than the head.²⁻⁵ This report describes two patients with a truncal rash associated with demodices.

CASE REPORTS

CASE 1

An otherwise healthy 40-year-old woman noted a pruritic rash on her upper chest for three months with variable symptoms. At times the rash would appear to fade, but according to the patient it "never really goes away." A few days prior to her presentation she had been working out-of-doors. This exercise seemed to have exacerbated the symptoms and made the rash more pronounced.

On inspection scattered papules were noted on the mid-upper chest in a follicular distribution. These had the gross appearance of small comedones, approximately 1 to 2 mm in diameter, and were raised about 1 mm from the surface of the skin. The papule was surrounded by a 2- to 3-mm margin of erythema. White material appeared at the orifice of the follicle. A potassium hydroxide preparation was made of this material, and a *Demodex* mite was identified.

A 1-percent lindane lotion was prescribed, which the patient used twice without benefit. She returned about one month later and stated that the rash was spreading across her chest and onto her back. She also complained that the pruritus was worse. A *Demodex* mite was again demonstrated. Following one treatment with lindane, a 10-percent crotamiton cream was used. This brought prompt relief. She remained free of signs and symptoms when she was seen approximately three months later.

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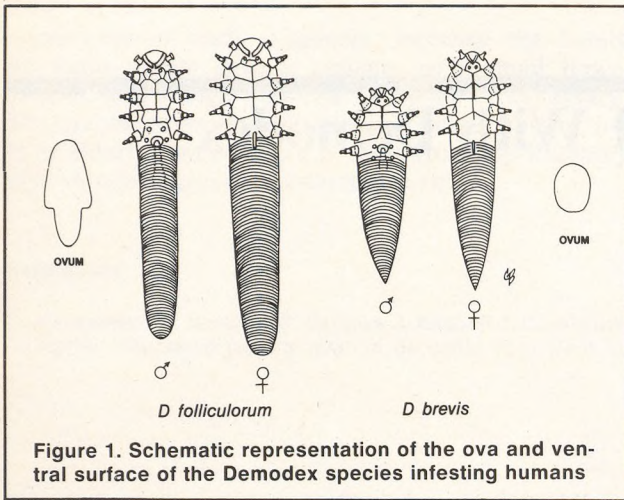


Figure 1. Schematic representation of the ova and ventral surface of the *Demodex* species infesting humans

CASE 2

A 31-year-old woman noted a slightly pruritic rash on her back for three years. Symptoms were variable, and tended to be worse in warm weather, after exercise, and at bedtime. When she became pregnant, she noted an increase in the pruritis and the extent of the rash. (The rash appeared very similar to the rash in case 1.) A potassium hydroxide preparation revealed one *Demodex*. Because of the pregnancy, she was treated with 10-percent precipitated sulphur in a standard oil-in-water lotion (Lubriderm). This was applied at bedtime for five nights, and she noted resolution of her signs and symptoms. *Demodex* could not be demonstrated on two occasions within the year following treatment, and she remained asymptomatic.

COMMENT

Since *Demodex* is ubiquitous, it is not clear why disease associated with the mite is not more common. Factors such as personal hygiene, mite allergy, or increased sebum production associated with puberty or pregnancy may increase host susceptibility.¹²⁻¹⁷

In vitro culture of demodices has not been very successful.¹² The possible pathogenicity of *D folliculorum* and *D brevis* and their in vivo behavior are currently at the level of speculation and anecdote in spite of well over a century of observation! The existence of two species is neither widely appreciated by physicians nor noted in recent standard texts^{7-9,11}; however, it is gen-

erally felt that *D folliculorum* does not usually cause illness. Less is known about the behavior of *D brevis* even at the anecdotal level. Thus, it is important to differentiate between the two species, since their pathogenic potential may be different. This differentiation was not done with these patients because the author was not aware that two species existed; however, crude drawings made at the time suggest *D brevis*. That solitary mites were found on the trunk as opposed to the face also suggests *D brevis*.

It is hoped that this communication will stimulate an awareness and interest in *Demodex* among family physicians, for they have the greatest opportunity to make observations about the disease potential of these mites in a wide variety of patients.

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