

LETTER

A new method in demodex imaging: Shining demodex in the dark field mode of the new generation digital light microscope

Dear Editor,

Demodex mite is an ectoparasite that can be found in the normal flora. The incidence increases with age. Although demodicosis may occur as a result of uncontrolled growth of the mite, primary dermatological diseases such as rosacea may also exacerbate.¹ Dermoscopy and microscopy methods are used in the diagnosis of demodex. Microscopic examination is performed by examining the superficial skin biopsy sample taken from the patient under a light microscope. Superficial skin biopsy is performed with cyanoacrylate dripped onto a slide.² Artifacts such as cyanoacrylate and hair follicles can prevent the detection of demodex. It can be difficult to detect mites in preparations containing heavy artifacts.

In our study, we wanted to emphasize that the demodex mite gives a bright white color in the dark field microscope, and this makes it easy to detect the mite. To achieve this bright white color, we used a new generation digital microscope, which is actually a light microscope. It has been shown in previous publications that demodex mites give off a bright white color in the dark.³ However, dark field microscope technology is not available in every unit. Dark field microscope is not preferred by dermatologists because it is an expensive device and has limited use in dermatology practice. Light microscope is mostly used in dermatology practice. Since the dark field microscope is only used for imaging *Treponema pallidum*, its usage area is limited. We overcome this problem by converting a new generation digital microscope to a dark field microscope with different light adjustments. With this method we developed, we were able to visualize spirochetes.⁴ Therefore, we have transformed the light microscope, which takes up a great deal of space in dermatology practice, into a dark field microscope. In this dark field microscope we designed, we obtained a better image in mite detection thanks to the bright white color given by demodexes. In [Video-1](#), we show that the mite in the artifacts cannot be clearly selected in the light microscopy mode, but when the dark field mode is switched to, the mite becomes more visible by giving a bright white color. In the dark field mode, the mite becomes bright white and at the same time, the image of the artifact-containing areas is lost.

With this feature, which we discovered in a new technological device, when we cannot get the image we want in the light microscope mode, we can switch to the dark field mode so that the demodex mite shines, and we can view the demodex better.

CONFLICT OF INTEREST STATEMENT

The authors declare that there is no conflict of interest that could be perceived as prejudicing the impartiality of the research reported.

FUNDING INFORMATION

The authors received no specific funding for this work.

Aslan Yürekli¹

Suzan Demir Pektaş²

Emine Tuğba Alataş²

Ceyda Tetik Aydoğdu¹ 

Dilek Daşgin¹

¹Muğla Sıtkı Koçman University Training and Research Hospital
Dermatology Department, Muğla, Turkey

²Muğla Sıtkı Koçman University Medical Faculty Dermatology
Department, Muğla, Turkey

Correspondence

Suzan Demir Pektaş, Muğla Sıtkı Koçman University Medical Faculty
Dermatology Department, Muğla, Turkey.
Email: draslanyurekli@gmail.com

ORCID

Ceyda Tetik Aydoğdu  <https://orcid.org/0000-0002-7192-9066>

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SUPPORTING INFORMATION

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