DEWS		
DEWS		
		1010 10 2004
DADDODTEUD	Gary N. Foulks	10 ⁴⁴ 19 2004
RAPPORIEUR		
TEST	MEIBOGRAPHY/MEIBOSCOPY	
	Meibomian gland morphology and density and drop-out.	Robin et al. 1985;
ТО	Diagnosis of Meibomian gland dysfunction (MGD)	Jester et al. 1982
DIAGNOSE		
VERSION of	[V1]	Robin et al. 1985;
TEST		Jester et al. 1982
DESCRIPTION	Meiboscopy is the visualization of the meibomian gland by	Mathers et al.
	transillumination of the eyelid. Meibography implies	1994
	photographic documentation	
CONDUCT of	Meiboscopy: The most basic version uses white light from a	
TEST	Finoff transilluminator. This is applied to the cutaneous side	
	of the evened eyend and allows observation from the	
	glands can be observed and gland loss or "dron-out"	
	quantified	
	Meibography is the photographic documentation of the image	
	of the gland under such illumination. Variations on the theme	
	include the use of infrared photography or videophotography.	
Web Video	Not available	
Materials:	• Finoff head light, slitlamp biomicroscope	
	• (variation: infrared light source and sensor;	
	videography)	
Variations of	1) infrared photography 2) videography	Pflugfelder 1998
technique	Variations in scoring systems	Shimazaki 1998
		Y OKO1 2007
Standardization	Illumination [√]	Y OKO1 2007
Standardization Diagnostic	Illumination $[]$ This version: $[x]$ Most reliable test in patients with	Kaercher et al.
Standardization Diagnostic value	Illumination $[]$ This version: $[x]$ Most reliable test in patients with ectodermal dysplasia syndrome	Kaercher et al. 2004
Standardization Diagnostic value	Illumination $[]$ This version: [x] Most reliable test in patients with ectodermal dysplasia syndrome Other version: []	Kaercher et al. 2004
Standardization Diagnostic value Repeatability	Illumination [√] This version: [x] Most reliable test in patients with ectodermal dysplasia syndrome Other version: [] Intra-observer agreement. [] Intra-observer agreement. []	Kaercher et al. 2004
Standardization Diagnostic value Repeatability	Illumination [√] This version: [x] Most reliable test in patients with ectodermal dysplasia syndrome Other version: [] Intra-observer agreement. [] Inter-observer agreement. []	Kaercher et al. 2004
Standardization Diagnostic value Repeatability Sensitivity	Illumination [√] This version: [x] Most reliable test in patients with ectodermal dysplasia syndrome Other version: [] Intra-observer agreement. [] Inter-observer agreement. [] (true positives) []	Kaercher et al. 2004
Standardization Diagnostic value Repeatability Sensitivity Specificity	Illumination [√] This version: [x] Most reliable test in patients with ectodermal dysplasia syndrome Other version: [] Intra-observer agreement. [] Inter-observer agreement. [] (true positives) []	Kaercher et al. 2004
Standardization Diagnostic value Repeatability Sensitivity Specificity	Illumination [√] This version: [x] Most reliable test in patients with ectodermal dysplasia syndrome Other version: [] Intra-observer agreement. [] Inter-observer agreement. [] (true positives) []	Kaercher et al. 2004
Standardization Diagnostic value Repeatability Sensitivity Specificity Other Stats	Illumination [√] This version: [x] Most reliable test in patients with ectodermal dysplasia syndrome Other version: [] Intra-observer agreement. [] Inter-observer agreement. [] (true positives) [] (100 – false positives) [] Greatest value is determining presence or absence of gland.	Kaercher et al. 2004
StandardizationDiagnosticvalueRepeatabilitySensitivitySpecificityOther Stats	Illumination [√] This version: [x] Most reliable test in patients with ectodermal dysplasia syndrome Other version: [] Intra-observer agreement. [] Inter-observer agreement. [] (true positives) [] (100 – false positives) [] Greatest value is determining presence or absence of gland. Morphological variations, while interesting, are more	Kaercher et al. 2004
Standardization Diagnostic value Repeatability Sensitivity Specificity Other Stats	Illumination [√] This version: [x] Most reliable test in patients with ectodermal dysplasia syndrome Other version: [] Intra-observer agreement. [] Inter-observer agreement. [] (true positives) [] (100 – false positives) [] Greatest value is determining presence or absence of gland. Morphological variations, while interesting, are more difficult to quantify.	Kaercher et al. 2004
Standardization Diagnostic value Repeatability Sensitivity Specificity Other Stats Test problems	Illumination [√] This version: [x] Most reliable test in patients with ectodermal dysplasia syndrome Other version: [] Intra-observer agreement. [] Inter-observer agreement. [] (true positives) [] (100 – false positives) [] Greatest value is determining presence or absence of gland. Morphological variations, while interesting, are more difficult to quantify. The limitation is the subjective nature of the observation.	Kaercher et al. 2004
Standardization Diagnostic value Repeatability Sensitivity Specificity Other Stats Test problems Test solutions	Illumination [√] This version: [x] Most reliable test in patients with ectodermal dysplasia syndrome Other version: [] Intra-observer agreement. [] Inter-observer agreement. [] (true positives) [] (100 – false positives) [] Greatest value is determining presence or absence of gland. Morphological variations, while interesting, are more difficult to quantify. The limitation is the subjective nature of the observation. An improvement could be standardized photographs as	Kaercher et al. 2004
Standardization Diagnostic value Repeatability Sensitivity Specificity Other Stats Test problems Test solutions	Illumination [√] This version: [x] Most reliable test in patients with ectodermal dysplasia syndrome Other version: [] Intra-observer agreement. [] Inter-observer agreement. [] (true positives) [] (100 – false positives) [] Greatest value is determining presence or absence of gland. Morphological variations, while interesting, are more difficult to quantify. The limitation is the subjective nature of the observation. An improvement could be standardized photographs as reference.	Kaercher et al. 2004
Standardization Diagnostic value Repeatability Sensitivity Specificity Other Stats Test problems Test solutions FORWARD LOON	Illumination [√] This version: [x] Most reliable test in patients with ectodermal dysplasia syndrome Other version: [] Intra-observer agreement. [] Inter-observer agreement. [] (true positives) [] (100 – false positives) [] Greatest value is determining presence or absence of gland. Morphological variations, while interesting, are more difficult to quantify. The limitation is the subjective nature of the observation. An improvement could be standardized photographs as reference. Improved photographic documentation.	Kaercher et al. 2004
Standardization Diagnostic value Repeatability Sensitivity Specificity Other Stats Test problems Test solutions FORWARD LOOK Character	Illumination [√] This version: [x] Most reliable test in patients with ectodermal dysplasia syndrome Other version: [] Intra-observer agreement. [] Inter-observer agreement. [] (true positives) [] (100 – false positives) [] Greatest value is determining presence or absence of gland. Morphological variations, while interesting, are more difficult to quantify. The limitation is the subjective nature of the observation. An improvement could be standardized photographs as reference. Improved photographic documentation.	Kaercher et al. 2004

References

Jester JV, Rife L, Nii D, Luttrull JK, Wilson L, Smith RE: In vivo biomcroscopy and photography of meibomian glands in a rabbit model of meibomian gland dysfunction. *Invest Ophthalmol Vis Sci* 1982;22:660-7.

Kaercher R: Ocular symptoms and signs in patients with ectodermal dysplasia symdromes. *Graefes Arch Clin Exp Ophthalmol* 2004;495-500.

Mathers WD, Daley T, Verdick R: Video imaging of the meibomian gland. Arch Ophthalmol 1994;112:448-9.

Pflugfelder SC, Tseng SC, et al. Evaluation of subjective assessments and objective diagnostic tests for diagnosing tear-film disorders known to cause ocular irritation. *Cornea* 1998;17:38-56.

Robin JB, Jester JV, Nobe J, Nicholiades N, Smith RE: In vivo transillumination biomicroscopy and photography of meibomian gland dysfunction. *Ophthalmology* 1985;92:1423-6.

Shimazaki J, Goto E, et al. Meibomian gland dysfunction in patients with Sjogren syndrome. *Ophthalmology* 1998;105:1485-8.

Yokoi N, Komuro A, Yamada H, Maruyama K, Kinoshita S. A newly developed video-meibography system featuring a newly designed probe. *Jpn J Ophthalmol* 2007;51: 53-6.