

自動化眼瞼下垂檢測系統

Automatic Blepharoptosis Detection System

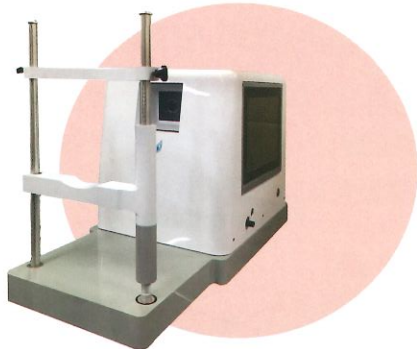
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技術摘要

眼瞼下垂係指提上瞼肌或米勒肌功能減弱或喪失，導致上眼瞼下緣遮蓋黑色瞳仁(虹膜)上緣過多，從而影響視野或外觀。傳統眼瞼下垂檢測為醫師使用量尺人工測量各項參數並加以評估，屬於主觀且不具信度及效度之量測方法，導致術前與術後之診療判斷和診療效益評估困難。

自動化眼瞼下垂檢測系統為具臨床客觀性、準確性及一致性之自動化影像量測設備，能客觀偵測記錄各項眼瞼數據(如下表)，有助於醫師精確評估眼瞼下垂嚴重程度，提供健保給付申請時客觀性資訊；亦可做為與病患及家屬面對面溝通之便利工具，建立診斷與治療之標準程序。



Blepharoptosis refers to the weakening or loss of the Levator muscle of the upper eyelids or Muller's muscle function, resulting in the pupil (iris) being covered by the eyelid, thereby affecting the visual field and appearance. The conventional ptosis assessment is considered a subjective, unreliable, and invalid method as a manual measurement and evaluation of various parameters are performed by doctors using a measuring ruler. Hence, it is difficult to judge and evaluate the benefits of diagnosis and treatment before and after surgery.

The Automatic Blepharoptosis Detection System (ABDS) is an automated image measurement equipment featuring clinical objectivity, accuracy, and consistency. It can accurately detect and record all kinds of blepharoptosis parameters, as listed below, that helps doctors to assess the severity of blepharoptosis, and further determine the treatment method. ABDS provides objective information when applying for health insurance benefits. It can also be used as a convenient tool for face-to-face communication with patients and their family members. The most important is that ABDS establish a standard procedure for diagnosis and treatment of blepharoptosis.

本參數名稱	參數定義	示意圖	本參數名稱	參數定義	示意圖	本參數名稱	參數定義	示意圖
MRD1	瞳孔中心至上眼瞼下緣中心點距離 (Margin-Reflex Distance 1)		PFL	眼角左緣點至眼角右緣點水平距離 (Palpebral Fissure Length)		LF	眼瞼肌功能(右圖中紅色實線與虛線之距離) (Levator Function)	
MRD2	瞳孔中心至下眼瞼上緣中心點距離 (Margin-Reflex Distance 2)		OSA	眼球體表面積(右圖紅線包圍之面積) (Ocular Surface Area)		ECH	上眼瞼下緣中心點到雙眼皮之距離 (Eyelid Crease Height)	
PFH	上眼瞼下緣至下眼瞼上緣之垂直距離 (Palpebral Fissure Height)		Blepharoptosis Severity	平視狀態下，上眼瞼下緣蓋住虹膜之距離		ICD	兩側眼頭的間隔距離 (Interpupillary Distance)	

應用範圍

眼瞼下垂患者

相關專利

中華民國(TW)：1673034

美國(US)：17/263428

中國(CN)：201880095482.X