

## **A Prospective study of the Bell's phenomenon in 1882 consecutive patients using various techniques for testing**

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**Aim:** Since the description of the Bell's phenomenon by Charles Bell in 1823, there has been no consensus on the grading and method of testing. We studied the Bell's phenomenon in patients with various techniques to study the variations with each method and graded it using an easily replicable system.

**Material & Methods:** A prospective study was conducted by examining 1882 consecutive patients with respect to the Bell's phenomenon using three techniques: On gentle eyelid closure, on forced eyelid closure and on transcutaneous transillumination. The upward movement of the eyeball was graded as +1 and +2 while a down-turned Bell's response was graded as -1 or -2 depending on undilated pupil visibility. When there was no movement in the vertical plane, the response was recorded as Grade 0.

**Results:** The mean age of the 1882 patients was 53 years (range:18 to 102 years). Females (56%) outnumbered males (44%). On transcutaneous transillumination, 89% of individuals showed a Grade 1 or 2 response for Bell's phenomenon while only 11% displayed Grade 0,-1 or -2. On gentle eyelid closure,79% individuals demonstrated Grade 1 or 2 and 7% showed -2 response. This proportion changed on forced eyelid closure with 91% patients displaying a positive graded Bell's phenomenon.

**Conclusion:** Our study thus attempts to address the need for a universal clinical grading and testing method for Bell's phenomenon. This will enable a uniform understanding and documentation of the Bell's phenomenon.

**References:** **1.** Francis IC et al. *Bell's phenomenon. A study of 508 patients. Aust J Ophthalmol.* 1984;12(1):15-21 **2.** Cohen SW et al. *Testing of Bell's phenomenon by transocular transcutaneous transillumination. Am J Ophthalmol.* 1977;84(5):735