There is good to excellent inter-observer agreement amongst physicians and physician assistants in measuring edema and ecchymosis in both eyes. Physicians and physician assistants show reliable intra-observer reliability in the same day however there was poor agreement between staff and patients. Also excellent agreement was present for periorbital edema and ecchymosis measured twice on the same day by the same physician. Post-operative day #2 edema score 2 (range 1 - 3) and ecchymosis score 1.5 (range 0 – 3) for both the right and the left eye. Post-op day #7 edema score 1 (range 0 - 2) and ecchymosis score 0 (range 0 – 1)

Reliability

Item tested

Kappa value

Confidence intervals

Statistical analysis was done using JMP, Version 8. SAS Institute Inc., Cary, NC. We found good to excellent agreement between physicians (staff and trainees) and between staff and physician assistants for both edema and ecchymosis. There was poor agreement between staff and patients and between staff and lay persons. Cronbach's alpha was 0.84 for the right eye and 0.89 for the left eye. There was excellent intra-observer agreement for both edema and ecchymosis for both the right and the left eye. Post-operative day #2 edema score 2 (range 1 - 3) and ecchymosis score 1.5 (range 0 – 3) for both the right and the left eye. Post-op day #7 edema score 1 (range 0 - 2) and ecchymosis score 0 (range 0 – 1)

The junior author reviewed the scales used in the literature to evaluate edema and ecchymosis following rhinoplasty. The scales identified by Kara and modified by Yucel and Kara (2008) were used in the study. The + sign indicates that the score is high and the − sign indicates that the score is low. Cronbach's alpha was 0.84 for the right eye and 0.89 for the left eye. There was excellent intra-observer agreement for both edema and ecchymosis for both the right and the left eye. Post-operative day #2 edema score 2 (range 1 - 3) and ecchymosis score 1.5 (range 0 – 3) for both the right and the left eye. Post-op day #7 edema score 1 (range 0 - 2) and ecchymosis score 0 (range 0 – 1)

Patient self-measurement and measurement by accompanying lay persons and physician assistants were in agreement. The scale was used by participants and members of the lay public in measuring edema and ecchymosis.

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Post-Op. Day

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