Odom's criteria

Outcome	Definition
Excellent	All preoperative symptoms relieved; abnormal findings improved
Good	Minimal persistence of preoperative symptoms; abnormal findings unchanged or improved
Fair	Definite relief of some preoperative symptoms; other symptoms unchanged or slightly improved
Poor	Symptoms and signs unchanged or exacerbated

The Odom criteria, established in 1958, are a widely used, 4-point rating scale for assessing the clinical outcome after cervical spine surgery.

Originally described in relation to outcomes associated with cervical discectomy, the outcome criteria described by Odom as applied to lumbar discectomy are:

excellent (“no complaints referable to lumbar disc disease” and no functional impairment)

good (“intermittent discomfort” without significant functional impairment)

satisfactory (subjective improvement but significant functional limitations)

poor (no improvement or worsened condition). The rating is generally performed by an individual other than the patient, often the treating physician. The use of such a scale may be improved by reporting clear criteria for each stratum, but the method is limited by its reliance on an observer's interpretation of the patient's clinical status [1)].

Surprisingly, the Odom criteria have never been validated.

The aim of a study was to investigate the reliability and validity of the Odom criteria for the evaluation of surgical procedures of the cervical spine.

Patients with degenerative cervical spine disease were included in the study and divided into 2 subgroups on the basis of their most predominant symptom: myelopathy or radiculopathy. Reliability was assessed with interrater and test-retest design using quadratic weighted kappa coefficients. Construct validity was assessed by means of hypotheses testing. To evaluate whether the Odom criteria could act as a global perceived effect (GPE) scale, we assessed concurrent validity by comparing area under the curve (AUC) values of receiver operating characteristic (ROC) curves for the set of questionnaires.

A total of 110 patients were included in the study; 19 were excluded, leaving 91 in our analysis. Reliability assessments showed $\kappa = 0.77$ for overall interrater reliability and $\kappa = 0.93$ for overall test-retest reliability. Interrater reliability was $\kappa = 0.81$ for the radiculopathy subgroup and $\kappa = 0.68$ for the myelopathy subgroup. At least 75% of the hypotheses were met. The AUCs showed similar characteristics between the Odom criteria and GPE scale.

The Odom criteria met the predefined criteria for reliability and validity. Therefore, the Odom criteria may be used to assess surgical outcome after a cervical spine procedure, specifically for patients

presenting with radicular symptoms. The results of previous studies that have been deemed less trustworthy because of the use of the Odom criteria should be reconsidered [2].

References

1)
Odom GL, Finney W, Woodhall B: Cervical disc lesions. JAMA 166:23-28, 1958
2)
Broekema AEH, Molenberg R, Kuijlen JMA, Groen RJM, Reneman MF, Soer R. The Odom Criteria: Validated at Last: A Clinimetric Evaluation in Cervical Spine Surgery. J Bone Joint Surg Am. 2019 Jul 17;101(14):1301-1308. doi: 10.2106/JBJS.18.00370. PubMed PMID: 31318810.