

1970

1969-1971

Determination of the optimal approach to traumatic [atlas fractures](#) with or without [transverse atlantal ligament](#) (TAL) injury requires a nuanced understanding of the biomechanics of the [atlantoaxial](#) complex. The “rule of Spence” (ROS) was created in [1970](#) in a landmark effort to streamline management of burst-type [atlas fractures](#). The ROS states that radiographic evidence of lateral mass displacement (LMD) (i.e., the distance that the C1 lateral masses extend beyond the C2 superior articular processes) greater than 6.9 mm may indicate both a torn TAL and need for surgical management. Since then, the ROS has become ubiquitous in the spine [literature](#) about atlas injuries. However, in the decades since the original paper by Spence et al., modern research efforts and imaging advancements have revealed that the ROS is inaccurate on both fronts: it neither accurately predicts a TAL injury nor does it inform surgical decision-making. The purpose of this review was to delineate the history of the ROS, demonstrate its limitations, present findings in the existing literature on ROS and LMD thresholds, and discuss the current landscape of management techniques for TAL injuries, including parameters such as the atlantodental interval and type of injury according to the Dickman classification system and AO Spine upper cervical injury classification system. The ROS was revolutionary for initially investigating and later propelling the biomechanical and clinical understanding of atlas fractures and TAL injuries; however, it is time to retire its legacy as a rule ¹⁾

[Fungal infections](#) of the [central nervous system](#) (CNS) were considered rare until the [1970s](#).

[Arquivos de Neuro-Psiquiatria](#) is the official [journal](#) of the [Brazilian Academy of Neurology](#) (ABN) since [1970](#). It publishes its consensus and [guidelines](#) on neurology, educational and scientific material from its different departments and also guidance of interest to neurologists’ professional activities.

¹⁾

Kopparapu S, Mao G, Judy BF, Theodore N. Fifty years later: the “rule of Spence” is finally ready for retirement. J Neurosurg Spine. 2022 Feb 11:1-8. doi: 10.3171/2021.12.SPINE211188. Epub ahead of print. PMID: 35148514.

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