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Spinal lesions carry a double threat: damage to the vertebral column and damage to the neural tissues. There is always fear that movement may cause or aggravate the neural lesions; hence the importance of defining these lesions as stable or unstable ***(Graham and Louis, 1993).***

The exact assessment of instability or potential instability of the cervical spine remains controversial. Until recently and to some extent presently, cervical spine instability has been largely a matter of opinion. Since the major function of the cervical spine is to protect the spinal cord and nerve roots, theoritically, any insult in which damage to either of these structures is considered overtly unstable ***(Tollison and Satterthwaite, 1992).***

Graham and Louis (1993) defined a stable injury is one in which vertebral components will not be displaced by normal movements so that an undamaged cord is not in danger; an unstable injury is one in which further displacement may occur.

Abnormal mobility between any pair of vertebrae with or without pain or other clinical manifestation is another definition of cervical spine instability ***(Arthur, 1995)***.

Jamshid and Suzanne (1996) tried to simplify the definition, they stated that spinal instability is the inability to maintain relationships between vertebrae thus leading to neurological impairment.

There are many other definitions of cervical spine instability, however, there is no one definition seems to fill all circumstances ***(Tolison and Satterthwaite, 1992).***

To rationalize the debate ***Leventhal, 1998; Volker et al., 1996 and Edward, 1995,*** accepted the definition of ***White and Panjabi (1978).*** They defined clinical instability as "loss of the ability of the spine under physiological loads to maintain relationships between vertebrae in such a way that the spinal cord or nerve roots are not damaged or irritated and deformity or pain does not develop".

The *aim of this work* is to study the pathological characteristics of the different causes of upper and lower cervical spine instability and to discuss the role of imaging modalities in their evaluation.