Degeneration of the zygapophysial joints (Z joints) has been associated with back pain. In addition, the Z joints are also structures significantly affected by spinal manipulation. Z joint degeneration can be evaluated on standard radiographs if the appropriate views are used. Although degeneration is visualized on radiographs, quantification of these Z joint changes has received little attention. Four point classification scales for quantifying the severity of degeneration of the Z joints have shown promise, however there are no reports of acceptable reliability using a five point scale. A reliable five point scale may allow a more subtle quantification of the severity of degenerative changes. A more subtle quantification would be useful in future research studies and may also help clinicians more accurately assess lumbar x-rays of their patients. A modification of a five point scale developed by Kellgren was used in this study. The results indicated that the modified Kellgren five point grading system provided acceptable intra- and inter-rater reliability when observers were adequately trained in these methods. We conclude the Modified Kellgren grading system may be a useful method for future investigations assessing the relative degeneration of the Z joints in research subjects, comparison to animal studies assessing spinal degeneration with induced hypomobility, and in assessing Z joint degeneration in back pain patients.

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