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Secondary degenerative changes in the intervertebral disc due to zygapophyseal (para-vertebral) facet joint lesions.

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1.0 INTRODUCTION

The Pathopysiology and biomechanics of the intervertebral disc (disc) is well research in the literature. Less prevalent however, is the emphasis on the articulating paravertebral facet joints (facet joints). Biomechanically and inter relationship has been observed, but not elaborated upon.
Pathologically, the assumption seemed to be that, the focus was that the intervertebral disc was the prime source of the lesion at the intervertebral disc and the facet joint level.

The author also chose to change this model by arguing the intervertebral disc forms a space between two vertebra and that it imbibes and expels nourishing fluids depending on movement allowed to it by the articulating facet joints and then also adjacent tissue and muscle. Restriction in this function would then lead to degenerative changes in the intervertebral disc. The disc responds to movement allowed by the posterior articulating structure.

In order to examine the role of the facet joint in degeneration in the annulus fibrosus of the intervertebral disc, the study designed looked to radiologically examine the position of the nucleus pulposus by injecting a radio opaque dye in order to observe dye migration. The disc was then transversely dissected through the middle and the two holes were macroscopically photographed, again to observe and record movement of the nucleus pulposus and narrowing of the annulus fibrosus. The annulus fibrosus was examined microscopically to observed flaking or degeneration in the anular rings.

The articulating facet joints were then dissected through the capsule on the periphery and the joint surfaces exposed for macroscopic examination.

Finally, a table of findings was drawn up and the correlation between ipsilateral facet degeneration and annual degeneration reported. Some of the modules did not support the findings and they are reported on. The outcome was however favourable to the hypothesis.