Correlation between Lumbosacral Transitional Anatomy and Pars Defect

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Transitional anatomy and pars defects are two common incidental findings seen on imaging of the lumbosacral spine. The purpose of this study is to investigate whether there is a correlation between these two common lumbar spine phenomena.
A retrospective review was conducted of patients presenting with thoracolumbar fractures at our emergency department between 2017 and 2018. CT scans from 260 patients were obtained and assessed for the presence of lumbosacral transitional anatomy and pars defect.
RESULTS

- From the 260 patients reviewed, 16 patients had transitional anatomy and 20 patients had pars defect. Only one patient presented with both transitional anatomy and pars defect. Overall, there was no difference in incidence of pars defect whether transitional lumbosacral anatomy was present (5%) or not (6.25%), $p = 1.00$, Fisher’s Exact.
The findings suggest that patients with transitional anatomy are not at increased risk of pars defects.