Leukocyte Poor Platelet Rich Plasma in the Treatment of Chronic Lumbar Radiculopathy

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Case report:

A 76 year old gentleman presented with a 9 year history of low back pain and right lumbar radiculopathy. These symptoms developed without trauma and he initially underwent two lumbar epidural steroid injections which were not helpful. He was using naproxen as needed for pain relief and had completed several courses of physical therapy and continued a home exercise program. Despite conservative management his symptoms did not improve. His pain involved the low back, right buttock, right lateral thigh and lower leg. Pain was increased with standing and improved with sitting. Physical exam was remarkable for weakness of 4/5 right extensor hallucis and 5-/5 right dorsiflexion. Right straight leg raise was positive for lower leg pain at 45 degrees. MRI demonstrated severe right L5 neuroforaminal stenosis secondary to disc bulge and facet arthropathy. Pain was rated at an average of 5/10.

We performed an interlaminar epidural steroid injection (ESI) at the right L5-S1 level which provided short term near resolution of pain, however, it had returned to baseline by his follow up 2 months later. A caudal ESI was then performed, which also provided only temporary relief. We then performed a leukocyte poor platelet rich plasma injection (Emcyte Pure PRP, Fort Myers, FL) into the epidural space via the via the right L5 transforminal route as well as via the interlaminar route at the right L4-5 level and caudal route. A PRP injection was also performed into the right SI joint. This provided good relief of his sacroiliac pain, however, the radicular pain demonstrated only moderate improvement. Two months later a repeat PRP epidural was performed via the caudal route. At 3 month follow-up, low back pain and radicular pain remained resolved.

Comparative studies have demonstrated that epidural leukocyte poor PRP performs as well (Bise) (Xu) or better than ESI (Saraf) (Singh) in the treatment of radicular pain with PRP possibly being a safer alternative (Bise).

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