

Outcomes of Transforaminal Epidural steroid injection in Patients with Lower limb Radiculopathy

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Abstract

Introduction:

• Lumbar radiculopathy is a common and costly medical and socioeconomic problem with life time prevalence of 40-60%. Lumbar TFESI are performed to provide symptomatic pain relieve. • TFESI provide low volume of concentrated medication to the selected nerve root, more selective and low complication technique of choice for radiculopathy treatment

Method

- This descriptive study was conducted at the North Okalarpa Teaching and general Hospital, Department of Orthopaedics for 18 month duration(October 2015 to May 2017).
- Total 162 patients were admitted and 30 patients (18.51%) were treated with TFESI.
- Patient's conditions were assessed with VAS for pain and ODI before procedure. After injection, outcomes were assessed with VAS for pain and satisfaction and ODI
- Regular follow up is upto 32 weeks.

Conclusion

• TFESI is effective for radiculopathy with good outcome result in both short term and long term. It is more effective in younger age group in short term (P=0.002).

Procedural Method

- **Procedure is done** as a day case procedure.
- Patients are placed prone on the operation table. **The skin is prepared with antiseptic swabs** several segment above and below to the inter space to be injected. The area is draped with sterile fashion. Sedation was not given routinely not to mask the probable complication. In case it was necessary (excessive excitement, anxiety etc) conscious sedation was provided with 1-2 mg of midazolam.



Figure 1. Patient Position Under C arm During Procedure

- Under AP C arm view, the target interspace is identified. The soft tissue over the lateral border and midway between the two adjacent transverse process at the target interspace is anesthetized.
- A 22 gauge , 4 ³/₄ inch spinal needle is inserted and advanced it within the anesthetized soft tissue under fluoroscopy until contact is made with the lower edge of the superior transverse process near its junction with the superior articular process.
- The spinal needle is retracted 2 to 3 mm, it is redirected toward the base of the appropriate pedicle, and it is slowly advanced to the 6 o' clock position of the pedicle under fluoroscopy. The C arm is adjusted to lateral projection to confirm the position, and the C arm is returned to the anteroposterior view.
- The stylet is removed, 2 ml volume containing 1 ml of
- **2 percent lignocaine and 1ml of 40mg per ml Triamcinolone acetate is injected slowly.**



Figure 2.AP View of C arm showing spinal needle postion

RESULTS



Final VAS for Pain



Pre Injection ODI



Final ODI



MRI Findings

MRI Findings	No of Patient	Percent
Protrusion type PID	14	46.7
Extrusion type PID	8	26.7
Foraminal stenosis	8	26.7
Total	30	100

Relationship between Age group and MRI Finding

A go group		N				
Vs MRI Findings		Protrusion	Extrusion	Forami nal	Total	
	10.45	10	2	stenosis	15	
A go group	18-45yr	10	3	2	15	
inge group	46-65yr	4	5	6	15	
Total		14	8	8	30	





Relationship between Age group and ODI improvements

	Preinjection ODI						1st week followup ODI							
										0-	21-	41-		
Time Vs			21-		41-	61-		Invali		20	40	60	60-	
Age 0-20%		0-20%	40%		60%	80%	>80%	d		%	%	%	80%	>80%
Age Grou p	18- 45 yr	0		3	8	2	2	0		4	7	4	0	0
	46- 65y	0		0	4	6	5			0	5	5	Ę	0
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	18-													
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Age	18-45 yr	1	0	8	8 6		0	0	1	0	8	3	6 0	0
p Grou	46-													
	65yr	1	0	1() 4) (0	1	2	8		$\frac{4}{0}$	0



Summary

- The use of epidural injection had satisfactory results in treating lumbar radiculopathy.
- Overall acute improvement in VAS for pain was 60%, sub-acute for 73.3% and chronic for 73.3%.
- **ODI improvement was 53.3% for acute and 60% for sub-acute and chronic.**
- Patient satisfaction scores were excellent 53.33% for acute and 46.66% for chronic cases.
- There was no major complication of the procedure.

Recommendation

• Transforaminal epidural steroid injection with fluoroscopic guidance should be tried in cases not response to other conservative measures and cases at high risk group for surgical intervention.