



EFFICACY OF MINIMAL INVASIVE TECHNIQS AND PHYSIOTHERAPY IN GERIATRIC PATIENTS WITH LOW BACK PAIN

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AIM

This study was carried out with the aim of determining whether minimal invasive technics were effective or not for low back pain management in geriatric population.

MATERIALS & METHODS

Totally twenty patients (mean age:66.2±7.03; 15 F, 5 M) with chronic low back pain (CLBP). 14 patients had minimal invasive surgery (radio frequency ablation (n=10), sacral epiduroscopic laser decompression (n=4)) and physiotherapy application additionally. 6 patients received physiotherapy application alone.

Exclusion Criteria

- have any spine surgery
- have any neurological and cognitive disease
- Scoliosis

Pain Pressure Threshold

Digital Algometer (Wagner Pain Test®)

Before and after physiotherapy application followings were measured from muscle belly.

Process of lumbar spinous

M.Piriformis

M.Quadratus Lumborum

M.Quadriceps Femoris

M.Tibialis Anterior

M.Gastrocnemius

M. Hamstrings

PHYSIOTHERAPY APPLICATION

15 sessions of physiotherapy including hot-pack, relaxatio training and spinal stabilization exercise were applied to all patients.

RESULTS

After treatment PPT increased in all areas as to before treatment in both groups. Difference were only significant increases of PPT in piriformis, hamstring muscles and processus spinosus of L5 (p<0.05). Changes in PPT is seen in table 1 and 2.

Table 1. Changes in PPT in spinous proces

group	L5	L4	L3	L2	L1
FD	3.9±2.7	0.9±2.4	1.8±2.1	1.4±2.8	1.4±2.9
RFA	1.9±1.8	1.7±1.7	2.3±2.0	2.9±2.5	1.6±1.3
SELD	0.7±0.6	0.2±0.6	0.1±0.5	0.4±0.3	0.2±0.2
PA	0.03±3.8	0.9±1.9	1.6±1.2	0.9±2.3	0.7±0.7
p	.050*	.50	.33	.42	.19

*p<0.05

Table 2. Changes in PPT in muscle

group	QLR	QLL	piriR	piriL	QFR	QFL	hamsR	hamsL
FD	2.6±2.1	2.1±1.4	2.7±2.2	2.0±2.6	1.3±1.6	1.7±2.0	2.0±3.1	3.2±3.8
PA	0.9±1.1	0.8±0.9	1.1±1.2	0.5±0.9	1.6±1.1	0.8±0.9	1.7±2.6	2.4±1.5
RFA	2.2±1.6	1.9±1.6	3.3±2.8	1.4±0.6	0.8±1.9	2.24±2.2	1.3±2.5	1.4±1.3
SELD	1.3±2.8	2.4±1.9	0.04±0.3	0.05±0.9	0.09±1.3	1.6±3.1	0.02±0.3	0.6±0.5
p	.35	.31	.50*	.11	.23	.17	.56	.39*

*p<0.05

FD: Facet denervation
RFA: Radiofrequency ablation
PA: Physiotherapy alone
SELD: Sacral epiduroscopic laser decompression
QLR: Quadratus lumborum right
QLL: Quadratus lumborum left
PFR: Piriformis right
PFL: Piriformis left
QFR: Quadriceps femoris right
QFL: Quadriceps femoris left
HamsR: Hamstring right
HamsL: Hamstring left

CONCLUSION

- This study showed immediate effects of minimal invasive technics and physiotherapy.
- For precise comments the number of patients should be increased and long term follow-up were needed.

REFERENCES

- 1-Koes, Bart W., et al. "Randomised clinical trial of manipulative therapy and physiotherapy for persistent back and neck complaints: results of one year follow up." *Bmj* 304.6827 (1992): 601-605.
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