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## Effect of adding Ozone Sauna in Low Back Pain treatment [abstract]

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### ABSTRACT

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**Purpose.** To evaluate the effect of adding ozone sauna with local ozone (O<sub>3</sub>) injection in low back treatment and comparing it to local O<sub>3</sub> injection alone.

**Material and Methods.** This study was conducted on 40 patients suffering from chronic low back pain (< 6 month), (Age: 35-65 years.), (L1/L2 to L5/S1), and Pain Assessment depends on Pain Scale before treatment and after 2, 4, 6, 8, 10, 12 sessions.

Patients are divided randomly into 2 groups; each with 20 patients (12 males and 8 females).

Group (A): received local O<sub>3</sub> injection (7-12 mcg./ml.) for 12 sessions twice weekly.

Group (B): received local O<sub>3</sub> injection as group (A) followed by OZONE SAUNA for 12 sessions twice weekly.

**Results.** The results of the two treatment groups are shown in Tables 1 and 2.

Table 1. Group A

No. of sessions	Pain Scale						No. of PT. their pain scale become less than		
	10-9	8-7	6-5	4-3	2-1	0	(A) <60%	(B) <40%	(C) <20%
0	4	16	-	-	-	-	-	-	-
2	4	8	5	3	-	-	8 = 40%	3 = 15%	-
4	4	6	4	4	-	-	8 = 40%	4 = 20%	-
6	3	4	4	4	1	-	9 = 45%	5 = 25%	1 = 5%
8	2	3	3	6	6	-	15 = 75%	12 = 60%	6 = 30%
10	2	2	1	7	6	2	16 = 80%	15 = 75%	8 = 40%
12	2	1	2	4	8	3	17 = 85%	15 = 75%	11 = 55%

Table 2. Group B

No. of sessions	Pain Scale						No. of PT. their pain scale become less than		
	10-9	8-7	6-5	4-3	2-1	0	(A) <60%	(B) <40%	(C) <20%
0	5	15	-	-	-	-	-	-	-
2	4	4	4	5	2	1	12 = 60%	8 = 40%	3 = 15%
4	4	1	1	4	8	2	15 = 75%	14 = 70%	10 = 50%
6	3	1	2	3	9	2	16 = 80%	14 = 70%	11 = 55%
8	2	1	2	2	11	2	17 = 85%	15 = 75%	13 = 65%
10	1	1	1	1	11	5	16 = 80%	17 = 85%	16 = 80%
12	1	1	1	1	10	6	18 = 90%	17 = 85%	16 = 80%

**Discussion.** Previous studies were done proving that treating chronic low back pain by antibiotics for long periods gives good results.

Systemic effect of Ozone Sauna (its bactericidal effect [1]) could be the reason standing behind the fast and sustained improvement of patients receiving it and local ozone injections (its anti-inflammatory effect) at the same time.

Paravertebral local ozone injections 10-12 sessions, twice weekly (200-400mcg.) showed good results [2]:

- A. 40% optimal improvement.
- B. 35-40% marked improvement.
- C. 15-25% minimal or no improvement.

**Conclusion.** Adding Ozone Sauna to local O<sub>3</sub> injections in treating chronic low back pain resulted in fast improvement and better outcome (more patients) than using local O<sub>3</sub> injections alone.

## References

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