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The combination of connective tissue massage, Kabat's technique, kinesitherapy and home exercise is helpful in face rehabilitation of Systemic Sclerosis patients

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BACKGROUND:

In Systemic Sclerosis (SSc), involvement of face and oral tissues causes aesthetic changes, impairment of the self-image and disability, mainly due to microstomia, in eating, speaking and oral hygiene measures.

The aim of the work is to evaluate the efficacy of a rehabilitation program specifically tailored for SSc patients face, based on a combination of Kabat's technique, connective massage, kinesitherapy and home program of mimic exercises, compared to home mimic exercises alone.

METHODS:

40 SSc patients (6 males and 34 females; age and disease duration: 57.28 ± 11.33 and 9.4 ± 4.3 years, respectively) were enrolled: 20 patients (Interventional Group) were treated for 9 weeks (twice a week, 1 hour per session) with a combination of connective tissue massage, Kabat's technique, kinesitherapy and home-based mimic exercises (three times a day) and 20 patients (control group) were assigned to home exercise program only. In both groups, home exercises were performed after the end of the treatment (T1) for further 9 weeks till the end of follow-up (T2), for a total duration of 18 weeks.

All patients were assessed at baseline (T0), at the end of the treatment (T1) and after 9 weeks of follow-up (T2) by Physical (PSI) and Mental Synthetic Index (MSI) of SF-36, HAQ disability index (DI); facial skin score (applied in 2 areas of the face, right and left cheek; total range 0-6), mouth opening and Mouth Handicap in Systemic Sclerosis (MHISS) scale.

RESULTS: At T1, both groups significantly improved in mouth opening, but the improvement was maintained at T2 only in Interventional Group. In Interventional Group, facial skin score ameliorated at T1, and maintained at T2, while no change was observed in Control Group. In both groups, SF-36 and HAQ-DI were not affected by the treatment. MHISS improved significantly in Interventional Group at T1, with the improvement not maintained at T2, while no change was found in Control Group.

CONCLUSION: The combination of connective tissue massage, Kabat's technique, kinesitherapy and home-based mimic exercises is more effective than home exercise program alone in the rehabilitative treatment of SSc facial involvement.

Table. Global health and face assessment at baseline (T0), at the end of treatment (T1) and after 9 weeks of at follow-up (T2) in group A in Interventional Group

	T0	T1	T2	T0 -T1	T0 -T2
	Mean± SD	Mean ± SD	Mean± SD	p	p
MSI (SF-36)	37,19±8,03	41,01±7,09	39,22±6,38	NS	NS
PSI (SF-36)	38,15±7,89	39,58±7,84	41,99±6,97	NS	NS
HAQ-DI	0,50 ± 0,72	0,24 ±0,29	0,16 ±0,09	NS	NS
Mouth opening (cm)	3,80 ±1,06	4,28±0,99	4,58 ±1,16	<0.05	<0.001
Skin score	3,90 ±1,55	1,60±0,99	1,75± 1,02	<0.001	<0.001
MHISS	17.20± 5.15	16.25±5.64	18.50±5.23	<0.001	NS

Legend: MSI =Mental Synthetic Index; PSI =Physical Synthetic Index; HAQ-DI= Health Assessment Questionnaire disease index; : Mouth Handicap in Systemic Sclerosis scale.