

## The Importance of dental methods in Treatment of TMJ Dysfunction (\*)

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Many studies have long been carried out concerned with the recognition and treatment of TMJ dysfunctions which are disorders of the masticatory system. Symptoms of such disorders include the limitation of and/or irregularity in mandibular movements, temporomandibular joint sounds and pain in the region of the joints, face, head and the muscles of mastication. Reports on the frequency of these symptoms have varied owing to the differences in examination methods and subjective evaluations of the relative significance of the symptoms encountered (Table 1).

The purpose of this study is the comparison of our results with the other authors', obtained by dental methods used in the therapy of TMJ dysfunction cases.

TMJ dysfunction is a very common finding in clinical dentistry. 59 female and 25 male (total 84) patients with TMJ dysfunction were admitted to our clinic. The ratio of females (% 70) to males

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Table 1 : Comparison of symptoms employed to select subjects with temporomandibular joint pain and dysfunction.

	Ramfjord 1961	Franks 1964	Bassette et al. 1971	Griffin Munro 1971	Yemm 1971	Greene Laskin 1971	Solberg et al. 1972	Lupton Johnson 1972	Gassel 1972	Zarb Thompson 1975	OR et al. 1979
Joint pain	X	X	X	X	X	X	X	X	X	X	X
Muscle pain or tenderness	X	X	X	X	X	X	X	X	X	X	X
Joint sounds		X		X				X	X	X	X
Limited mandibular function		X		X	X	X	X	X	X	X	X
Evidence of no organic path.					X	X	X	X	X	X	X

(% 30) was 2.3 in the observed cases. The cause of the frequent occurrence among females is unexplained in the literature. TMJ dysfunction symptoms were observed in all age groups but found mostly between 20-30 ages (% 56).

Dysfunction incidence was high especially in prosthesis wearers and in patients with malocclusions. The findings of many authors in TMJ dysfunction patients are seen in Table II.

**Table II : Sex and age composition of patients with mandibular dysfunction.**

Author (s)	No. of patients	Ratio of women to men	Dominating age group (yrs.)
Schwartz and Cobin (1957)	491	4:1	20—40
Cambell (1958)	899	3.5:1	—
Thompson (1959)	100	4:1	18—30
Franks (1964)	613	3:1	20—40
Kruse (1965)	435	4:1	20—40
Gelb <sup>a</sup> et al. (1967)	742	3:1	30—60
Perry (1968)	467	4:1	40—50
Carraro et al. (1969)	763	4:1	20—30
Agerberg et al. (1970)	104	9:1	20—40
Takada et al. (1971)	348	2.3:1	15—30
OR et al. (1979)	84	2.3:1	20—30

The studies have always been directed to the treatment of symptoms. The most frequent dental catalysts for the development of dysfunction are :

- 1 — Occlusal discrepancies between centric relation and centric occlusion.
- 2 — Heavy, nonworking tooth contacts.
- 3 — Loss of vertical dimension of occlusion.

During our clinical investigation we observed many patients with occlusal abnormalities who have not complained of dysfunction. Yemm (7) and Thompson (6) also reported that the differences



of the results between their test and control groups were insignificant where the patients in test group had dysfunctions concerned with occlusal abnormalities. Studies by Agerberg (1) and Helkimo (3) under-score the strong possibility that these patients have masticatory systems that function close to the limit of tolerance, and when this limit is occasionally exceeded pain and dysfunction develop.

Satisfactory results in the clinic were limited due to the limitation of treatment directed only towards the dental methods, therefore the suggestion occurred that dysfunction as the result of microtrauma can appear due to the inflammatory variations on joint, tendons and muscles. These patients were recommended to keep to soft diets and minimal jaw activity and in certain cases bimaxillary fixation was preferred to immobilize the mandible. The methods applied in order to obtain the symptomatic therapy to inflammatory response are seen in Table III.

**Table III : Treatment methods selected to obtain symptomatic relief.**

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1. Patient counseling
  2. Occlusal adjustment
  3. Bite-plane treatment
  4. Jaw exercises
  5. Medication : analgesics, muscle relaxants, sedatives
  6. Use of topical and/or local anesthetics
  7. Mandibular immobilization using interdental wiring
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Bite planes or splints may be effective in a subtle physiologic or psychologic way or they may change the skull-mandible relationship so as to minimize or neutralize the noxious effects of mandibular activity. The elimination of an occlusal discrepancy or the recovery of an altered or lost vertical dimension of occlusion may control the noxious stress on the masticatory system, so that a resolution of symptoms will occur.

The cause of our success in cases under therapy seems to be the result of elimination of many factors instead of breaking only one point in the causal chain. The concept described by Rugh and Solberg (5) also supports our decision of multifactorial origin.

## RESUME

Dans ce travail, nous avons expliqué de la fréquence des dysfonction de joint temporo-mandibulaires dans la population et l'importance de leur traitement dental.

Les examens sur 84 patients ayant des dysfonctions de joint temporo-mandibulaires nous ont montré que les femmes ont une proportion de 2.3 sur les hommes et les symptômes sont maximum entre 20-30 âges. Nos méthodes dental que nous avons appliqués sont toujours sur le traitement des symptômes. En fin, des traitements nous avons comparé nos succès et problèmes avec les travaux des autres auteurs.

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