

Clinical Follow-up of Patients With Different Disc Positions

A clinical follow-up of 45 previously symptomatic patients with arthrographically diagnosed TMJ disc positions was performed at least 1 year (average, 4 years 4 months) after treatment. The patients were divided into three groups according to disc position: (1) superior disc position, n = 5; (2) anterior disc displacement with reduction, n = 17; and (3) anterior disc displacement without reduction, n = 23. Ninety-two percent of the patients were treated conservatively. Seventy percent of the patients reported being symptom-free or improved. The frequency of joint clicking did not change considerably, but the amount of crepitating sounds increased markedly. No difference was found regarding treatment outcome between the anterior disc displacement groups with and without reduction.

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Internal derangement of the temporomandibular joint (TMJ) is defined as an abnormal relationship of the articular disc to the condyle.^{1,2} Common signs are reciprocal clicking and locking. Reciprocal clicking is the clinical sign of anterior disc displacement with reduction,^{1,3} and locking is the clinical sign of anterior disc displacement without reduction.^{1,4} Several imaging methods have been used to depict the condition and relative positions of the soft tissue structures of the TMJ, eg arthrography,⁵ computed tomography, and magnetic resonance imaging.⁶ With arthrography, the diagnosis of anterior or oblique disc displacement with or without reduction can be verified in patients with a history and clinical signs of internal derangement.⁶⁻⁸

It has been clinically observed that some patients with disc displacement demonstrate various symptoms and signs from the TMJ and masticatory muscles.⁷⁻⁹ These patients have usually been treated conservatively with modalities that include combinations of counseling, mandibular exercises, occlusal splints, and occlusal adjustments.⁹⁻¹³ However, there are few long-term follow-up studies of these treatment modalities for internal derangement.¹⁴⁻¹⁷

The aim of this study was to evaluate patients who had been arthrographically diagnosed as having either superior disc position or anterior disc displacement with or without reduction with regard to symptoms, signs, clinical diagnosis, and treatment outcome at least 1 year after treatment.

Materials and Methods

From the file of arthrographic examinations at the Department of Oral Radiology (organized according to day of birth), 79 consecutive patients were selected. To be included in the study, patients had to have been treated at least 1 year previously, lived in or near

Table 1 Number of Patients and Reasons for not Participating in Follow-up

Arthrographic diagnosis	No. clinically examined patients	Reasons for dropping out			Total
		Address missing	Moved from the area	Refused	
Superior disc position	5	—	1	7	13
Anterior disc displacement with reduction	17	1	2	9	29
Anterior disc displacement without reduction	23	3	8	3	37
Total	45	4	11	19	79

Table 2 Age and Sex Distribution of the Examined Patients With Respect to Arthrographic Diagnosis

Age (y)	Superior disc position		Anterior disc displacement with reduction		Anterior disc displacement without reduction		Total	
	Men (n=0)	Women (n=5)	Men (n=4)	Women (n=13)	Men (n=3)	Women (n=20)	Men (n=7)	Women (n=38)
10-19	0	0	0	0	0	3	0	3
20-39	0	3	2	5	2	10	4	18
40-59	0	2	2	5	1	4	3	11
60-79	0	0	0	3	0	3	0	6
Mean age		36	44	46	41	37	43	40

Malmö, and been treated at the Department of Stomatognathic Physiology for craniomandibular disorders (CMD). Most patients were referred for arthrography because of TMJ pain, clicking, or locking. Thirteen patients were diagnosed as having a superior disc position (SDP), 29 patients had an anterior disc displacement with reduction (ADW), and 37 patients had an anterior disc displacement without reduction (ADWO).

At follow-up, 34 patients were lost to attrition (Table 1); 19 patients reported themselves to be free from symptoms and so declined participation, while 11 patients had moved from the area, and the whereabouts of 4 others were unknown. Clinical follow-up examinations were performed on 45 patients, 38 women and 7 men with a mean age of 40 and 43 years, respectively (Table 2). The average time from the end of treatment to the clinical follow-up was 4 years 5 months for the SDP group, 4 years 2 months for the ADW group, and 4 years 6 months for the ADWO group.

Radiological Examination

Arthrography was performed under fluoroscopic control by injecting water-soluble contrast medium (Omnipaque, 350 mg iodine/mL, Nyegaard & Co A/S, Oslo, Norway) into both joint compart-

ments. Opening and closing joint movements were recorded on videotape. The patient was then transferred to a tomographic unit (Polytome U, Massiot/Philips, Paris, France). Corrected sagittal tomography at intercusp and maximal mouth opening positions was undertaken using hypocycloidal movement. Disc position was classified according to Westesson et al.¹⁸ Registrations were made of advanced structural bone changes (large osteophyte and erosion), disc configuration (clearly deformed or normal), disc perforation, and position of the condyle in relation to the articular eminence at maximum mouth opening.

History

Patient history was obtained by questionnaire. Head and facial pain were evaluated according to a five-point verbal scale: 1 = none or very little, 2 = mild, 3 = moderate, 4 = severe, 5 = very severe. Patients were also asked to classify the intensity of pain on a visual analog scale (VAS) with two markings, one for the pain at the examination and one for the pain when it was at its worst. Also recorded were pain on mandibular movement, locking, history of trauma, systemic diseases, and treatment outcome. Treatment outcome was evaluated according to the following scale: 1 = totally symptom free, 2 = much better, 3 = little better, 4

Table 3 Radiologic Findings With Respect to Arthrographic Diagnosis

Radiologic finding	Superior disc position (n=5)	Anterior disc displacement with reduction (n=17)	Anterior disc displacement without reduction (n=23)
Side			
Left	1 (20%)	10 (59%)	11 (48%)
Right	4 (80%)	7 (41%)	12 (52%)
Advanced structural bone changes			
Yes	—	—	4 (17%)
No	5 (100%)	17 (100%)	19 (83%)
Disc configuration			
Clearly deformed	—	—	16 (70%)
Normal	5 (100%)	16* (94%)	6+ (26%)
Not possible to see	—	1 (6%)	1 (4%)
Disc perforation			
Yes	—	1 (6%)	5 (22%)
No	5 (100%)	16 (94%)	18 (78%)
Position of condyle at maximum mouth opening†			
Behind tubercle	1 (20%)	2 (12%)	12 (52%)
Top of tubercle	3 (60%)	6 (35%)	7 (30%)
In front of tubercle	1 (20%)	6 (35%)	3 (13%)

*4 patients with thick posterior band of disc.

†3 patients with thick posterior band of disc.

‡no radiographs of maximum mouth opening were found for 3 patients with anterior disc displacement with reduction and 1 patient with anterior disc displacement without reduction.

= unchanged, 5 = worse. Patients were also asked whether they wanted additional treatment.

Clinical Examination

The clinical follow-up examination of the stomatognathic system was performed by one of the authors (SV), using methods employed routinely at the Department of Stomatognathic Physiology.¹⁹ The methods were evaluated previously.^{20,21}

The clinical examination included registration of mandibular movements, TMJ sounds, and tenderness at palpation of the TMJs and masticatory muscles. Only tenderness in combination with any kind of reflex was noted. An occlusal analysis was made comprising registration of type of bite, asymmetric sliding (>0.5 mm) from retruded contact position to intercuspal position, and occlusal interferences. A clinical diagnosis was given at the follow-up. Treatment modalities and other clinical parameters were listed from patients' charts made at the time of treatment.

Table 4 Answers to the Questionnaire With Respect to Arthrographic Diagnosis

	Superior disc position (n=5)	Anterior disc displacement with reduction (n=17)	Anterior disc displacement without reduction (n=23)
Pain from head or face (moderate to very severe)	60%	35%	43%
Weekly or daily pain (moderate to very severe)	60%	30%	39%
Pain in the TMJ region			
When resting	40%	20%	18%
When chewing	—	16%	27%
At other movements	60%	40%	38%
Previous trauma to face, head, and jaw	20%	24%	34%
Previous locking	40%	59%	61%
Systemic disease—joint, muscle disease	—	30%	13%
Treatment outcome			
Symptom-free, better	60%	77%	74%
Unchanged, worse	40%	23%	26%
Ask for more treatment			
Yes	80%	18%	26%
No	20%	82%	74%

Results

Radiologic Findings

No advanced structural bone changes were found in the SDP and ADW groups, while 17% of the patients in the ADWO group exhibited advanced structural bone changes. Changes in disc configuration and perforations in the disc or in the posterior disc attachment were seen mainly in the ADWO group (Table 3).

Limited capacity for condylar movement at maximum mouth opening was found mainly in the ADWO group, but normal opening capacity was found in 43% of those patients (Table 3).

History

The answers to the questionnaire are presented in Table 4. A majority of the patients in all groups reported themselves as being symptom-free or better. Most of the patients in both anterior disc dis-

Table 5 Mean Values of Opening Capacity Before and After Treatment With Respect to Arthrographic Diagnosis

Arthrographic diagnosis	Maximum opening (mm)		Level of significance statistical (<i>t</i> test)
	Before treatment	After treatment	
Superior disc position	41	43	NS
Anterior disc displacement with reduction	49	46	NS
Anterior disc displacement without reduction	37	46	$P < .001$

NS = $P > .05$.

placement groups did not request further treatment, but 4 out of 5 in the SDP group did. In the SDP group the median value of VAS was 4 at the examination and 73 when worst. In the ADW group the respective median values were 0 and 30, and in the ADWO group they were 6 and 63. Some patients from the three groups reported pain from both head and face, and the pain usually occurred in the TMJ region, often in connection with mandibular movements (except mastication).

Clinical Examination

The mean maximum opening after treatment was within normal limits in all groups. The patients in the ADWO group had a statistically significant increase in opening capacity after treatment ($P < .001$; Table 5).

Regarding TMJ sounds, clicking was found in all groups before treatment but most often in the ADW group ($P = .03$, Fisher's Exact test; Table 6). After treatment, the frequency of clicking was still highest in the ADW group ($P = .03$, Fisher's Exact test) compared to the other two groups. Crepitating sounds had increased after treatment in all groups. In the SDP and ADW groups no crepitating sounds were found before treatment, but after treatment about 20% had crepitus. The prevalence of crepitus in the ADWO patients had tripled, from 13% to 39% of the group.

One patient in the ADW group and four patients in the ADWO group had TMJ tenderness to palpation laterally. Posterior tenderness of the TMJ on palpation was found in two patients in these groups. Tenderness to palpation of one or more muscles was noted in 100% of the SDP

group, in 77% of the ADW group, and in 70% of the ADWO group.

Regarding occlusion, 65% of the ADWO subjects had a postnormal relationship of the bite in the sagittal plane, and more than 50% had either deep or open bite in the vertical plane (Table 7). A lateral slide between the retruded contact position and the intercuspal position was found in a high percentage of patients in the ADW group (41%) and in the ADWO group (57%).

The treatment modalities given are presented in Table 8. The most common treatment was a combination of information, counseling, and splint therapy. Repositioning splints were rarely used. Surgery was performed in four patients.

Discussion

Attrition was high, but it was most common in the SDP group (62%). This group was also the smallest in the arthrographic examination files because of the low demand for arthrographic examination for patients in whom disc displacement is not suspected. Approximately 40% of the patients who were called back to the clinical follow-up did not come. However, in telephone interviews, most of the patients not participating reported themselves as being free from symptoms. Likewise, a high percentage of the patients who did come in for examination reported themselves as symptom-free or better. Registration of VAS showed low values in all groups at the follow-up, corresponding to the high percentage of successful treatment outcome. The overall treatment outcome was similar to the results of previous studies.^{9,10,14,22-26} The conservative treatments given to the patients in our study were not deliberately intended to put the disc in a reduced position, but only to reduce muscle hyperactivity and stabilize the occlusion. Consequently, most patients still demonstrated clicking at the follow-up.^{9,10,14,22-24,26}

In all groups a history of trauma was reported infrequently, although this factor has been reported as being a cause of internal derangement.^{22,23} Interesting to note is that the patients in the ADWO group had a high percentage of malocclusion. Berry and Watkinson²⁷ have considered the deepness of the bite a predisposing factor for the development of TMJ symptoms, but other studies have not shown any strong relation between malocclusion and TMJ symptoms.^{28,29} However, mediotrusion interferences, crossbite and frontal open bite were found to be more common in patients than in epidemiologic studies,²⁸

Table 6 Clinical Signs of TMJ Sounds Before and After Treatment With Respect to Arthrographic Diagnosis

Clinical signs	Superior disc position (n=5)		Anterior disc displacement with reduction (n=17)		Anterior disc displacement without reduction (n=23)		Total (n=45)	
	Before	After	Before	After	Before	After	Before	After
Clicking	2 (40%)*	—*	12 (71%)*	11 (65%)*	6 (26%)*	8 (35%)*	20 (44%)	19 (42%)
Crepitus	—	1 (20%)	—	4 (23%)	3 (13%)	9 (39%)	3 (7%)	14 (31%)
No sound	3 (60%)	4 (80%)	5 (29%)	2 (12%)	14 (61%)	6 (26%)	22 (49%)	12 (27%)

*Clicking was found before and after treatment statistically significant more often in the ADW group. ($P = .03$; Fishers's Exact test).

Table 7 Occlusal Relationship of Patients With Respect to Arthrographic Diagnosis

Arthrographic diagnosis	Sagittal plane			Vertical plane			Transverse plane		
	Normal	Pre-normal	Post-normal	Normal	Deep bite	Open Bite	Normal	Cross-bite	Scissor Bite
Superior disc position (n=5)	4 (80%)	—	1 (20%)	2 (40%)	2 (40%)	1 (20%)	3 (60%)	2 (40%)	—
Anterior disc displacement with reduction (n=17)	10 (59%)	3 (18%)	4 (23%)	9 (58%)	3 (18%)	5 (29%)	12 (71%)	5 (29%)	—
Anterior disc displacement without reduction (n=23)	8 (35%)	—	15 (65%)	10 (44%)	7 (30%)	6 (26%)	18 (78%)	4 (18%)	1 (4%)

and TMJ tenderness was more frequently found in Class II division 2 than in Class I patients.³⁰ In a survey article it was concluded that occlusal factors generally seem to be of minor importance.³¹ Another study suggests the possible importance of occlusal factors in individual cases.³²

In the ADWO group, the patients had restricted mouth opening before treatment. After treatment, the mouth opening capacity increased and became normal. This probably is achieved by elongation of the posterior disc attachment with further anterior displacement and advanced deformation of the disc.^{2,18}

The progression of internal derangement of the TMJ from ADW through ADWO to osteoarthritis has been discussed,^{1,7,33} and our findings also support this hypothesis. However, in accordance with earlier studies^{7,33,34} this did not mean that all of the patients in the ADW group advanced into ADWO or that all of the patients in the ADWO group developed osteoarthritis. In the ADWO group, five patients were clinically diagnosed as having ADW due to reciprocal clicking. This could be related to marked morphologic alterations in the surface contours of the disc, the condylar head, or both, as found by Tallents et al.³⁵ Another pos-

Table 8 Treatment Modalities Given to Patients With Respect to Arthrographic Diagnosis

Treatment	Superior disc position (n=5)	Anterior disc displacement with reduction (n=17)	Anterior disc displacement without reduction (n=23)
Information/counseling	5	17	23
Stabilizing splint	4	13	18
Repositioning splint	—	2	2
Occlusal adjustment	1	8	7
Biofeedback	1	1	2
Mandibular exercises	2	3	3
Physical therapy	1	1	3
Drugs	1	1	7
Intra-articular injection (corticosteroid)	—	—	1
Surgery (discectomy)	—	2	2
Others	2	1	—
Median of treatment modalities	4	3	3

sibility is that the anteriorly displaced disc without reduction had become an anteriorly displaced disc with reduction.

Structural bone changes were found more frequently in joints with nonreducing discs than in joints with reducing discs, as reported earlier by Eriksson and Westesson.⁷ The high frequencies of disc deformation and perforation in joints with anterior disc displacement without reduction also is in accordance with other studies.^{7,36} Four joints with anterior disc displacement with reduction and three with anterior disc displacement without reduction showed normal, biconcave discs, but the posterior band was interpreted as thickened, which also has been shown by Eriksson and Westesson.⁷ A thickening of the posterior band of a biconcave disc is probably a sign of disc deformation.

In patients with anterior disc displacement without reduction, the position of the condyle at maximum mouth opening was often found behind the tubercle, as was reported in earlier studies.^{7,37} However, in 43% of the patients in the ADWO group, the condyle reached or passed the tubercle at maximum mouth opening. This means that diagnosing patients with anterior disc displacement without reduction cannot be based solely on measurements of opening capacity or evaluation of condylar translation.

In summary, when patients with anterior disc displacement are treated conservatively, the outcome is generally favorable. Therefore, conservative treatment is preferred irrespective of the position of the disc.

References

1. Farrar WB, McCarty WL. Inferior joint space arthrography and characteristics of condylar paths in internal derangements of the TMJ. *J Prosthet Dent* 1979;41:548-555.
2. Dolwick MF, Katzberg RW, Helms CA. Internal derangements of the temporomandibular joint: Fact or fiction? *J Prosthet Dent* 1983;49:415-418.
3. Tallents RH, Katzberg RW, Miller TL, Manzione JV, Oster C. Arthrographically assisted splint therapy. *J Prosthet Dent* 1985;53:235-238.
4. Farrar WB. Characteristics of the condylar path in internal derangements of the TMJ. *J Prosthet Dent* 1978;39:319-323.
5. Westesson P-L. Temporomandibular joint: Comparison of single- and double-contrast arthrography. *Radiology* 1987;164:65-70.
6. Katzberg RW. Temporomandibular joint imaging. *Radiology* 1989;170:297-307.
7. Eriksson L, Westesson P-L. Clinical and radiological study of patients with anterior disc displacement of the temporomandibular joint. *Swed Dent J* 1983;7:55-64.

8. Roberts CA, Katzberg RW, Tallents RH, Espeland MA, Handelman SL. Correlation of clinical parameters to the arthrographic depiction of temporomandibular joint internal derangements. *Oral Surg Oral Med Oral Pathol* 1988;66:32-36.
9. Helkimo E, Westling L. History, clinical findings, and outcome of treatment of patients with anterior disc displacement. *J Craniomand Pract* 1987;5:269-276.
10. Mejersjö C, Carlsson GE. Long-term results of treatment for temporomandibular joint pain-dysfunction. *J Prosthet Dent* 1983;49:809-815.
11. Tallents RH, Katzberg RW, Macher DJ, Manzione J, Roberts C, Sommers E, et al. Arthrographically assisted splint therapy: A 6-month follow-up. *J Prosthet Dent* 1986;56:224-225.
12. Lundh H, Westesson P-L, Kopp S, Tillstrom B. Anterior repositioning splint in the treatment of temporomandibular joints with reciprocal clicking: Comparison with a flat occlusal splint and an untreated control group. *Oral Surg Oral Med Oral Pathol* 1985;60:131-136.
13. Lundh H, Westesson P-L, Jisander S, Eriksson L. Disk-repositioning onlays in the treatment of temporomandibular joint disk displacement: Comparison with a flat occlusal splint and with no treatment. *Oral Surg Oral Med Oral Pathol* 1988;66:155-162.
14. Lundh H, Westesson P-L, Kopp S. A three-year follow-up of patients with reciprocal temporomandibular joint clicking. *Oral Surg Oral Med Oral Pathol* 1987;63:530-533.
15. Lundh H, Westesson P-L. Long-term follow-up after occlusal treatment to correct abnormal temporomandibular joint disk position. *Oral Surg Oral Med Oral Pathol* 1989;67:2-10.
16. Clark GT. Treatment of jaw clicking with temporomandibular repositioning: Analysis of 25 cases. *J Craniomand Pract* 1984;2:263-270.
17. Isberg A, Widmalm SE, Ivarsson R. Clinical, radiographic and electromyographic study of patients with internal derangement of the temporomandibular joint. *Am J Orthod* 1985;88:453-460.
18. Westesson P-L, Bronstein SL, Liedberg J. Internal derangement of the temporomandibular joint: Morphologic description with correlation to joint function. *Oral Surg Oral Med Oral Pathol* 1985;59:323-331.
19. Krogh-Poulsen WG. Management of occlusion of the teeth. Examination, diagnosis, treatment. In: Schwartz L, Chayes CM (eds): *Facial Pain and Mandibular Dysfunction*. Philadelphia: WB Saunders, 1969: 251-258.
20. Kopp S, Wenneberg B. Intra- and interobserver variability in the assessment of signs of disorder in the stomatognathic system. *Swed Dent J* 1983;7:239-246.
21. Dworkin SF, LeResche L, De Rouen T. Reliability of clinical measurement in temporomandibular disorders. *Clin J Pain* 1988;4(2):89-99.
22. Farrar WB, McCarty WL Jr: *A Clinical Outline of Temporomandibular Joint Diagnosis and Treatment*. Montgomery, Alabama: Normandie Publications, 1981:53-88.
23. McCarty W. Diagnosis and treatment of internal derangements of the articular disc and mandibular condyle. In: Solberg WK, Clark GT (eds). *Temporomandibular Joint Problems: Diagnosis and Treatment of Internal Derangements of the Articular Disc and Mandibular Condyle*. Chicago: Quintessence, 1980:145-168.
24. Greene CS, Laskin DM. Long-term status of TMJ clicking in patients with myofascial pain and dysfunction. *J Am Dent Assoc* 1988;17:461-465.

25. Pedersen A, Hansen HJ. Long-term evaluation of 211 patients with internal derangement of the temporomandibular joint. *Community Dent Oral Epidemiol* 1987;15:344-347.
26. Okeson JP. Long-term treatment of disk interference disorders of the temporomandibular joint with anterior repositioning occlusal splints. *J Prosthet Dent* 1988;60:611-616.
27. Berry DC, Watkinson AC. Mandibular dysfunction and incisor relationship. A theoretical explanation for the clicking joint. *Br Dent J* 1977;144:74-77.
28. Mohlin B, Kopp S. A clinical study on the relationship between malocclusions, occlusal interferences and mandibular pain and dysfunction. *Swed Dent J* 1978;2:105-112.
29. Pedersen A, Hansen HJ. Internal derangement of the temporomandibular joint in 211 patients: Symptoms and treatment. *Community Dent Oral Epidemiol* 1987;15:339-343.
30. Pullinger AG, Seligman DA, Solberg WK. Temporomandibular disorders. Part II. Occlusal factors associated with temporomandibular joint tenderness and dysfunction. *J Prosthet Dent* 1988;59:363-367.
31. Carlsson GE, Droukas CH. Dental occlusion and the health of the masticatory system. A literature review. *J Craniomand Pract* 1989;2:141-147.
32. Roberts CA, Tallents RH, Katzberg RW, Sanchez-Woodworth RE, Espeland MA, Handelman S. Comparison of internal derangements of the TMJ with occlusal findings. *Oral Surg Oral Med Oral Pathol* 1987;63:645-650.
33. Westesson P-L, Lundh H. Arthrographic and clinical characteristics of patients with disk displacement who progressed to closed lock during a 6-month period. *Oral Surg Oral Med Oral Pathol* 1989;67:654-657.
34. Rasmussen OC. Description of population and progress of symptoms in a longitudinal study of temporomandibular joint arthropathy. *Scand J Dent Res* 1981;89:196-203.
35. Tallents RH, Katzberg RW, Miller TL, Manzione J, Macher DJ, Roberts C. Arthrographically assisted splint therapy: Painful clicking with a nonreducing meniscus. *Oral Surg Oral Med Oral Pathol* 1986;61:2-4.
36. Choltgul W, Petersson A, Rohlin M, Akerman S. Clinical and radiological findings in temporomandibular joints with disc perforation. *Int J Oral Maxillofac Surg* 1990;19:220-225.
37. Johansson AS, Isberg A. The anterosuperior insertion of the TMJ capsule and condylar mobility in joints with and without internal derangement. A double-contrast arthro-mographic investigation. In: *Temporomandibular Joint Internal Derangement. Tissue Reactions and Topographical Relations With Implication on Pain* [thesis]. Stockholm, Karolinska Institute, 1990.

Resumen

Visitas clínicas de control de pacientes caracterizados por tener discos en diferentes posiciones

Se realizaron una serie de exámenes clínicos de control en 45 pacientes previamente sintomáticos en quienes se habían detectado por medio de artrografías, diferentes posiciones en los discos de la articulación temporomandibular. Tales exámenes fueron realizados por lo menos una vez al año (promedio, 4 años 4 meses) después del tratamiento. Los pacientes fueron divididos en tres grupos de acuerdo a la posición del disco: (1) posición superior del disco, n = 5; (2) desplazamiento anterior del disco con reducción, n = 17; y (3) desplazamiento anterior del disco sin reducción, n = 23. El 92% de los pacientes fueron tratados conservadoramente. El 70% de los pacientes dijeron no tener síntomas o dijeron que habían mejorado. La frecuencia de los sonidos de clic en la articulación no cambió considerablemente, pero la cantidad de los sonidos de crepitación aumentó notablemente. No se encontró ninguna diferencia en cuanto al resultado del tratamiento entre los grupos que tuvieron desplazamiento anterior del disco con y sin reducción.

Zusammenfassung

Klinische Weiterverfolgung von verschiedenen Discuspositionen in Patienten

Eine klinische Weiterverfolgung von früheren Symptomen in 45 Patienten mit arthographische diagnostierten TMJ Discuspositionen wurde zumindest ein Jahr (im Durchschnitt, 4 Jahre und 4 Monate) nach der Behandlung durchgeführt. Die Patienten wurden je nach deren Discusposition in drei Gruppen geteilt: (1) superior Discusposition, n = 5; (2) anterior Discusverschiebung mit Reduzierung, n = 17; und (3) anterior Discusverschiebung ohne Reduzierung, n = 23. Zweiundneunzig Prozent der Patienten wurden konservierend behandelt. Siebzig Prozent der Patienten berichteten, dass sie frei von Symptomen oder verbessert sind. Die Häufigkeit der Gelenksklicken veränderte sich nicht viel, aber die Häufigkeit der knackenden Geräusche hat ausgesprochen zugenommen. Es wurde kein Unterschied gefunden hinsichtlich des Behandlungserfolgs zwischen anterior Discusverschiebung Gruppen mit oder ohne Reduzierung.
