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RE-EXAMINATION OF COMPLETE-DENTURE PATIENTS

II. STATUS AND NEED OF TREATMENT AFTER TWO YEARS

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INTRODUCTION

The supporting tissues for complete dentures are always affected by the dentures per se. This effect is more accentuated in those cases in which the result of primary treatment is not satisfactory. But even with an almost ideal therapeutic result the supporting tissues for dentures undergo biological changes. Even in those toothless cases in which no prosthetic replacement has been made, a reduction of the alveolar process seems to occur, *Weinmann* (1955), *Weinmann & Sicher* (1955), *Campbell* (1960).

In these connections a number of questions have been studied in Sweden by different writers. Thus *Nyquist* (1952) has established the importance of the traumatizing factors for the occurrence of stomatitis prothetica. The same writer showed (1953) that the composition of the bacterial flora and denture hygiene, on the other hand, had little importance in this connection. — *Bergman, Carlsson & Hedegård* (1961, 1964) have in longitudinal studies confirmed Nyquist's results from 1952 and have also

demonstrated the relatively rapid appearance of the biological changes. *Carlsson, Otterland & Wennström* (1966) stressed, in a socio-medical investigation, the importance of regular control of complete-denture patients.

No more detailed study, however, appears to have been made of the need for treatment that gradually arises in complete-denture patients. It is for this reason that this investigation has been undertaken.

The problems of the present investigation were thus the following:

1. What deviations from optimal conditions can be observed about two years after the conclusion of treatment with complete dentures?
2. To what therapeutic requirements do these deviations give rise?

MATERIAL AND METHOD

The population from which the material has been taken consisted of complete-denture patients at the School of Dentistry in Stockholm. The patients who had obtained complete dentures at the Student Clinic in the academic year 1961—1962 were chosen from this primarily limited population. These patients comprised altogether 200 individuals. By means of random selection 100 cases were drawn by lot to constitute the patients who were to be examined. Not all of these could be recorded. The non-response has amounted to 32 patients. The reasons for the non-response were distributed as follows:

Deceased	5	patients
Protracted illness	2	»
Present address unknown	15	»
Prevented by work	3	»
Moved from Stockholm	1	patient
Repeated absenteeism	1	»
Refused to be examined	2	patients
Treatment completely or in part revised	3	»
Total non-response	32	patients

Table I. *The distribution of the patients examined according to sex and age-group at the time of the examination.*

Age-group	Women	Men	Total
30—39	0	3	3
40—49	2	2	4
50—59	8	9	17
60—69	12	11	23
70—79	9	10	19
80—89	2	0	2
Total	33	35	68

Table II. *The simultaneous results of recording for each variable distributed between optimal and non-optimal conditions.*

Variable	Optimal conditions	Non-optimal conditions
Stability, upper jaw	34	34
» , lower jaw	47	21
Adaptation, upper jaw	49	19
» , lower jaw	48	20
Retention, upper jaw	42	26
» , lower jaw	41	27
Occlusion	34	34
Vertical dimension	53	15
Ridge, upper jaw	55	13
» , lower jaw	25	43
Stom. proth., upper jaw	26	42
» » , lower jaw	23	45
Speech	45	23
Total recordings	522	362

Althogether 68 patients have thus been examined. These comprised the same individuals as were recorded by *Korduner & Markén* in their study of deviations between observers in 1967.

The distribution of the patients according to age and sex is shown in table I. The average age for the women was 65 years, for the men 60 years, for all patients 62½ years.

About two years after the patients' discharge the following

Table III. *Distribution of satisfied and dissatisfied patients.*

	Satisfied	Dissatisfied	Total
Women	28	5	33
Men	28	7	35
Total	56	12	68

Table IV. *Immediate need for treatment.*

Measure to be adopted	Number of patients
Adjustment of periphery of denture	8
Polishing of artificial tooth	1
Removal of tartar	1
Relief	3
Local grinding	10
Selective grinding	18
Repair of denture	1
Rebasing upper jaw	5
» lower jaw	2
New lower denture	3
New complete denture	4
Leukoplakia	1
Total	57

variables have been recorded with the technique of simultaneous examination (two observers):

Stability
Adaptation to the supporting tissues
Retention
Occlusion
Vertical dimension
Appearance and consistency of the ridge
Stomatitis prothetica
Speech

The definition of the variables, their classification and the way in which they have been recorded are based upon *Nyquist* (1952) and *Bergman, Carlsson & Hedegård* (1961); see also *Korduner & Markén* (1967).

The patients' own view of the result of treatment has been indicated after interview. In this connection particular importance has been attached to esthetic factors, masticating capacity and freedom from discomfort. The therapeutic needs of the individual patients have been established simultaneously.

RESULTS

These are shown in the tables II, III and IV, to which comments are appended.

The simultaneous recordings, shown in Table II, refer to optimal and non-optimal conditions. By optimal conditions are meant good stability, correct occlusion, absence of stomatitis prothetica etc. By non-optimal conditions are meant poor adaptation, incorrect vertical dimension, poor ridge and so forth. Marked deviations from optimal conditions occurred; in all, these comprised 362 recordings of 884, or 41 per cent of the cases. Especially apparent were the non-optimal conditions with respect to the stability of the upper dentures, the occlusion, stomatitis prothetica in both jaws. The marked relative frequency of the bad lower-jaw alveolar ridges may be regarded as expected. The same applied to the favourable prosthetic foundation which was generally to be found in the upper jaw. It was obviously frequently possible to establish the vertical dimension according to the conventional view, viz., in 78 per cent of the 68 cases. In those cases in which the optimal vertical dimension was not found, it was always a matter of a free-way space exceeding 5 mm. Twenty-three patients (34 %) had certain difficulties in speaking, all of a mild nature.

Table III shows that: The majority of the patients were satisfied with their complete dentures, 56 of 68, or 82 per cent. There was no marked difference between those who had formerly had complete dentures and those wearing their first complete dentures. This emerged from a special study that is not presented in tabular form.

According to Table IV the need for treatment was great: 57 operations of varying kinds and degrees of difficulty were indicated in altogether 54 patients. Only 14 (21 %) of the 68 patients examined can be left without treatment after two years. Only six patients revisited the School of Dentistry on their own

accord to seek treatment for trouble with their dentures. Three of these were recorded in the tabular presentation of non-response as patients whose treatment was wholly or in part revised.

DISCUSSION

The results cannot be generalized. The patient material was a sample from a selective population; see *Markén & Arwill* (1956). They may possibly be said to be typical for complete-denture cases from the School of Dentistry in Stockholm. It does nevertheless appear probable that similar results will be obtained whatever patient-material of persons wearing complete dentures is systematically re-examined; compare *Nyquist* (1952), *Carlsson et al.* (1965).

Seen absolutely, the non-response was considerable, 32 cases (32 %). However, only three cases seem to be of a nature that *may* have affected the result. The status before the commencement of the treatment was incompletely known and has therefore not been indicated in detail. The status at the time of the patients' discharge was not recorded. Here it may be observed that the clinic at the School of Dentistry has strict requirements with regard to freedom from symptoms, function and an esthetic therapeutic result. This is not to say that certain negative details may be overlooked at the times when the patients were discharged. However, the study of the need for treatment after two years implied that these factors were not given decisive importance.

As regards stability, adaptation to the supporting tissues, retention, occlusion, vertical dimension, stomatitis prothetica, these were variables where deviations from optimal conditions implied consistent (stomatitis prothetica) or considerable (the other variables indicated) change from the time for the termination of the treatment. The frequency of deviations from optimal conditions after two years must therefore be considered high.

These changes were either incompletely or not at all apprehended by the patients. They seemed to be the result of continuous changes to which in most cases the patients adapted themselves well. Furthermore, the patients often ignored minor dis-

comforts. This is why only six patients revisited the School of Dentistry of their own accord.

In sharp contrast to this were the results with respect to the need for treatment according to the odontological estimate: 79 per cent of the cases needed after-care, but only 18 per cent of the patients were dissatisfied. The patient's own view seems to be a bad point of departure in connection with the odontological estimate of the therapeutic result.

CONCLUSIONS

1. On re-examination of complete-denture patients there is a risk of frequently finding deviations from optimal conditions with regard to stability, adaptation, retention, occlusion, vertical dimension.

2. Patients with complete dentures show a marked need of treatment after a relatively short time.

3. There is a risk that patients adapt themselves well to moderate changes in the function of the complete dentures and therefore all too seldom return to the dentist of their own accord.

4. Information and initiative for systematic re-examinations are therefore required from the dentist.

SUMMARY

In a material of 68 complete-denture patients frequent deviations from optimal conditions have on simultaneous recording been found with respect to stability, adaptation to the supporting tissues, retention, occlusion (vertical dimension) after two years. Stomatitis prothetica existed in the majority of cases. There have been immediate needs for treatment for 54 patients. The measures called for are of varying kinds. For the need for treatment to be met, initiative from the dentist seems most often to be necessary.

RÉSUMÉ

EXAMEN DE CONTRÔLE DE PORTEURS DE PROTHÈSES COMPLÈTES II. LA SITUATION ET LES BESOINS EN TRAITEMENT AU BOUT DE DEUX ANS

Dans un matériel se composant de 68 porteurs de prothèses complètes, on a constaté, lors d'examens faits au bout de deux ans, des

conditions divergeant fréquemment des conditions optimales de stabilité, d'adaptation aux tissus de soutien, de rétention, d'articulé et d'occlusion, dimension verticale. Dans la majorité des cas, on constatait une stomatite sous plaque prothétique.

Chez 54 patients, on constatait un besoin immédiat de traitement. Les mesures requises étaient de différentes natures.

Pour pourvoir aux besoins de traitement, il semble que l'initiative du dentiste soit le plus souvent nécessaire.

ZUSAMMENFASSUNG

NACHUNTERSUCHUNG VON FÄLLEN MIT TOTALEM PLATTENERSATZ II. STATUS UND BEHANDLUNGSBEDÜRFNIS NACH 2 JAHREN

Bei einem Material von 68 Patienten mit totalem Plattenersatz wurden bei simultaner Untersuchung häufige Abweichungen von den optimalen Verhältnissen in Bezug auf Stabilität, Anpassung an die Unterlage, Retention, Ocklusion, Bisshöhe nach einer Tragedauer von zwei Jahren festgestellt. Stomatitis prothetica lag in den meisten Fällen vor. Ein aktuelles Behandlungsbedürfnis lag bei 54 Patienten vor. Die erforderlichen Massnahmen waren verschiedener Art. Um den Behandlungsbedarf nachzukommen, scheint in den meisten Fällen eine entsprechende Initiative von Seiten des Zahnarztes notwendig zu sein.

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