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The need for and value of a maxillofacial prosthodontic service in the Witwatersrand-Vaal area: part II: A survey of patients who required maxillofacial prosthodontic treatment

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SUMMARY

The present study was undertaken to help plan future needs of patients with head and neck defects in a maxillofacial prosthodontic service for the Witwatersrand-Vaal area. A questionnaire was sent to 100 patients who had been treated in the Maxillofacial Prosthetic Service of the Department of Prosthetic Dentistry of the Oral and Dental Teaching Hospital of the Witwatersrand, Johannesburg. The major problem confronting the patients was the hardship endured while being placed on the waiting list prior to the initiation of treatment. The present study has clearly shown the need for a well-planned and effective maxillofacial prosthodontic service to be developed in the Witwatersrand-Vaal area.

OPSOMMING

Hierdie studie is onderneem om die behoeftes van hierdie pasiënte te bepaal en om toekomsbeplanning van dié dienste moontlik te maak. 'n Vraelys is aan 100 pasiënte wat vorige behandeling van dié aard by die Departement van Tandheelkundige Prostetiek aan die Universiteit van die Witwatersrand, Johannesburg, ontvang het uitgestuur. Die hoofklagte van die pasiënte was die lang tydsverloop voordat behandeling 'n aanvang kon neem. Hierdie studie toon dat daar 'n behoefte bestaan vir 'n goedbeplande en effektiewe kaak- en gesigsprostodontiese diens vir die Witwatersrand-Vaalgebied.

INTRODUCTION

Deformities or mutilations of the head and neck region may be the result of congenital defects, trauma, disease, or surgery. Multilation of a body part, particularly in the head and neck region, can be a traumatic factor affecting the psyche (Jebreil, 1980). The psychological inability to compensate for the physical loss may have a devastating effect on an individual.

The surgical removal of a facial structure and the resultant defect lowers a person's image of his social acceptability (Hutcheson and Udagama, 1980). Worse still, the changes caused by radical surgery are often viewed by patients as the termination of their former life, and they view any facial deformity as setting them apart from other members of society. (Shipman and Bader, 1979). The relationship between the actual severity of disfigurement and the degree of psychological stress experienced is not a simple one (Bailey and Edwards, 1979). Often patients whose disabilities are relatively slight may have greater expectations for the restoration of their appearance, and therefore may be the more disappointed since their hopes are unrealistically high (Beder and Weinstein, 1980).

The need to minimise negative responses to facial disfigurement in the most sensitive immediate post-surgical phase is essential for the positive self-esteem and effective rehabilitation of the patient (Shipman and Bader, 1979). An immediate replacement prosthesis helps the patient through this emotionally taxing phase and allows him to maintain his concept of self-dignity (Hutcheson and Udagama 1980).

The artificial replacement of missing body parts has existed as long as man himself, and has increased in the last four decades. The ability of medical and dental specialists to rehabilitate patients with defects of the head and neck has also become greater with the development of materials and techniques but this has been countered by population growth with an accompanying increased demand for treatment. It would appear that today, the only acceptable and effective method of management of the head and neck patient is by a multidisciplinary team approach (Rahn and Boucher, 1970; Desjardins, 1979; Gillis, 1979; Sela and Lowenthal, 1980; Parr, Goldman and Rahn, 1981). This necessitates that maxillofacial prosthodontic centres be designed as integral parts of the medical centres which they are designed to serve (Chalian, 1978).

An attempt has been made over the past 5 years to integrate, in an informal way, the activities of the Maxillofacial Prosthodontic Service of the Department of

Prosthetic Dentistry of the Oral and Dental Teaching Hospital of the Witwatersrand, Johannesburg, with the other services providing treatment for patients with deformities of the head and neck. This has led to rapid increase in demand for access to the maxillofacial prosthodontic service by patients. The result of this has been that there is inadequate staff to attend to cases requiring surgical prostheses, and waiting lists exist for surgical, interim and definitive prostheses. The objective of this part of the present study was to determine the value of the existing maxillofacial prosthodontic service to those patients who had been treated at the Oral and Dental Teaching Hospital of the Witwatersrand. From this information it was hoped that knowledge could be gained as to how the needs of patients in the future can be met in planning for an adequate maxillofacial prosthodontic service.

MATERIALS AND METHODS

Methods of survey of patients

A total of 100 questionnaires (copy available from authors) was sent to patients randomly selected from those who had been treated for maxillofacial defects at the Department of Prosthetic Dentistry, Oral and Dental Teaching Hospital of the Witwatersrand, Johannesburg. These were accompanied by a covering letter explaining the nature of the investigation, and a self-addressed envelope. All replies were anonymous.

Statistical analysis

The replies received were transferred to computer punch cards and the statistical analysis which was restricted to descriptive statistics was carried out using the SAS* (Statistical Analysis System) Version 79,5 on an IBM 370/158 Computer.

RESULTS

Of the 100 questionnaires sent out, 52 questionnaires (52 percent) were returned. This was considered to be a good response, considering that at least some of those who had been treated had probably either moved or died. The inferences drawn are representative only of those who had replied and not of the whole group of patients surveyed.

Certain questions were not answered by all the patients who replied. Therefore the cumulative frequency in the tables which follow will not always total 52.

Age of patients

The age distribution of the patients who returned the questionnaire has been detailed in Table 1.

It can be seen from Table 1 that 63,5 per cent of the patients who replied to the questionnaire were between 51-80 years of age. Of these 57,7 per cent were female.

Ethnicity of patients

The ethnic groups of the respondents are shown in Table 2.

* SAS (Institute Inc.), University of North Carolina, U.S.A.

Table 1 — **Age distribution of patients**

	Frequency	Percentage
1-10	2	3,8
11-20	6	11,5
21-30	5	9,6
31-40	1	1,9
41-50	4	7,7
51-60	10	19,2
61-70	12	23,1
71-80	11	21,2
81 +	1	1,9
Total	52	100,00

Table 2 — **Ethnicity of patients**

	Frequency	Percentage
Black	9	17,3
Indian	1	1,9
Coloured	3	5,8
White	39	75,0
Total	52	100,00

Cause of the problem

Patients were asked to indicate the broad cause of their problem (Table 3).
The commonest cause was disease.

Table 3 — **Cause of problem**

	Frequency	Percentage
Born with problem	7	13,5
Caused by an accident	7	13,5
Caused by disease	36	69,2
Not stated	2	3,8
Total	52	100,0

Prior treatment

Patients were asked to indicate what form(s) of treat ment they had received prior to coming to the Oral and Dental Hospital. The frequency of these treatments is shown in Table 4, and because several patients had more than one type the cumulative frequency is greater than 52.

Table 4 — **Prior treatment**

	Frequency
X-Ray (cobalt)	16
Surgery	34
Chemotherapy	4
Not sure	13
Total	67

The mode of treatment carried out at the Oral and Dental Hospital

Patients were asked to indicate what treatment they had required. Table 5 shows that the majority (73,1 per cent) required intra-oral appliances.

Table 5 — **Treatment required**		
	Frequency	Percentage
For use inside the mouth	38	73,1
For use outside the mouth	10	19,2
Both	4	7,7
Total	52	100,00

Length of wait for an appointment

Patients were asked to specify how long they had had to wait for an appointment at the Oral and Dental Hospital. The frequency of the length of wait is tabulated in Table 6. It will be seen that 60 per cent had had to wait a month or longer; 25 per cent had had to wait for three months or longer.

Table 6 — **Length of wait for an appointment**		
	Frequency	Percentage
1 week	21	40,4
1 month	17	32,7
3 months	8	15,4
6 months	4	7,7
1 year or longer	2	3,8
Total	52	100,0

Progress of Treatment

78,8 per cent indicated that the course of treatment had progressed smoothly and 86 per cent felt their treatment had been succesful. 74,5 per cent of those who replied were still wearing the appliances which had been supplied. However, 64,7 per cent of those who replied felt they needed more treatment, and 66,7 per cent wanted further treatment.

Information provided prior to treatment

88,5 per cent stated that they had been given adequate information about their treatment before commencement, and 28,8 per cent felt that more information would have been helpful. This is in direct contrast to the literature reviewed.

DISCUSSION

No reference to a previous similar study could be found in the literature and thus no direct comparison to other workers was possible.

When the study questionnaire was sent out, patients on the waiting list for maxillo-facial prosthetics (at present greater than one year) were not included. The results of this study, therefore, only reflect the attitudes and desires of patients who had had maxillo-facial prosthetic treatment. It is possible that the replies of these patients were biased in favour of what they perceived the investigators might want to hear.

Most patients treated were older than 50 years, but almost a quarter were below 30 years. In the design of a suitable treatment centre allowance should be made for the needs of both young and old. The age distribution also supports the importance of psychological counselling as an integral activity within the maxillo-facial prosthetic service.

The limited staffing of the service and historical ties to the Johannesburg Hospital was responsible for the imbalance of ethnic distribution of patients. In the future planning of a service it is essential that this imbalance be eliminated. Since the service must be centralized, sufficient clinical staff must be made available to allow presence at head and neck, cleft palate, radiotherapy, ophthalmic and other clinics of the Johannesburg, Hillbrow, Baragwanath, Coronation and other hospitals. Once patients have been seen and discussed with the medical personnel of these hospitals, transport arrangements will have to be made to move patients to the centralized maxillo-facial prosthetic service.

The patient survey emphasized the importance of disease as the main cause of head and neck defects, especially in those above 50 years of age. Of the patients who responded a significant number had had radiotherapy and chemotherapy which frequently have sequelae which may result in changes in the oral environment. Careful control of the patient's oral health prior to and after such treatment can greatly enhance the outcome of dental treatment. It is essential therefore that adequate facilities and personnel be provided for the maintenance of oral hygiene. It is also for this reason that many centres will include a clinician familiar with oral medicine.

It was found that 73,1 per cent of respondents had had intraoral treatment and 19,2 per cent received paraoral treatment. Only 7,7 per cent of patients required combination prostheses and this would seem to indicate that for the sake of efficiency of the service in a major centre it would be worthwhile to have staff dedicated to facial prosthetic work while others would be dedicated to intraoral work since the two areas require highly developed and specialized but differing skills. This has in fact been the trend in most major maxillo-facial prosthetic centres throughout the world.

A large number of patients indicated that they both needed and wanted further treatment, but these were those who had been successful in obtaining maxillo-facial prosthetic treatment, not those on the waiting list (approximately one year). Even of those treated, approximately 60 per cent were required to wait a month or longer and 25 per cent had to wait for 3 months or longer before any treatment could be initiated. The success rate of treatment has been shown to increase as waiting time decreases (Sela and Lowenthal, 1980) due to psychological reasons.

The major problem appears to be that demand for treatment overloaded the resources available to provide that treatment. This resulted in long waiting lists onto which patients were placed before they could be seen. Complications arise from this as patients cannot be provided with adequate surgical and interim prostheses. Control of treatment is therefore lost early on and the entire treatment period is greatly extended with considerable increases in cost and loss of efficiency. Maxillofacial prostheses, particularly facial prostheses, require regular remaking. The average lifespan of a prosthesis is 10 months (Jebreil, 1980). The waiting list results in patients, once having had a prosthesis made, not being able to obtain replacement prostheses as preference has to be given to new, as yet untreated patients. The prob-

lem remains that due to the multidisciplinary nature of head and neck rehabilitation it is difficult for maxillofacial prosthodontic treatment to be undertaken in the private sector. This means that the patient with a head and neck defect is often obliged to make use of the institutionalized maxillofacial prosthodontic service where there is little or no hope of immediate attention. The consequences of this, to many of these patients, are extremely serious as without the necessary treatment they are unable to eat, speak or face their families due to the mutilations with which they have been left.

CONCLUSIONS

The results of the present study clearly show the need for a well-planned and effective maxillofacial prosthodontic service to be developed in the Witwatersrand-Vaal area. In its present form, limited by lack of trained manpower and inadequate facilities, the existing service at the Oral and Dental Teaching Hospital of the Witwatersrand, Johannesburg does not meet the demands of either the referring practitioners or of the patients. With this determined anticipated escalation in demand it would appear that the development of the service should be seen as a matter of urgency.

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