

A NEGLECTED FACTOR IN PROSTHESIS.¹

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My serious attention to artificial full dentures was first attracted about 26 years ago under circumstances that created in me a deep-seated prejudice against their use.

Changes in the vocations of several edentulous (toothless) persons, with whom I was at that time intimately associated, presented some aspects that led me to investigate the influence of their artificial dentures upon their speech, both subjective and objective, with the result that I became convinced that in these cases the use of artificial dentures interfered not only with their objective speech—enunciation and pronunciation—but with definite subjective processes.

Since then I have had opportunity to study the psychic effect of artificial dentures in a number of persons ranging from early middle age to extreme old age, in several instances having the cases under personal observation during a quarter of a century.

An examination of dental literature, with reference to the psychologic phases involved in full denture prosthetic service, shows that the discussions have concerned themselves mainly with the following:

Convincing the edentulous patient of the practicability of artificial full dentures; and the desirability, and perhaps, in a few instances, the necessity of their adoption.

Securing the patient's confidence in the operator in regard to the latter's professional ability and honor.

Establishing and maintaining an intelligent spirit of co-operation on the part of the patient.

Suggesting the advisability of obtaining opinions from relatives and friends in matters touching the esthetic values in the selected dentures.

Developing the patient's confidence in himself, and suggesting methods of instruction for the retention and the use of the dentures.

Considering matters relating to fees, disposition of old dentures, future adjustments of the new dentures, etc.

And, lastly, in a few paragraphs here and there, indicating the possible effect of artificial dentures on the enunciation and the pronunciation of the patient's words—a treatment merely objective.

It will readily be seen that the psychologic complex presented in the foregoing is an intricate one, and that the problems which arise under this analysis require for their solution professional relationships.

My observation and investigation, however, lead me to conclude that there exist many cases of subjective speech interference as the result of wearing artificial full dentures; and inasmuch as the solution of this problem has so far almost entirely been left to the patient, it may be pardonable for a layman to call attention to the existence of the problem.

¹ Abstract of a paper entitled "The Psychologic Complex in Full Denture Service—From the Viewpoint of a Layman, with Special Reference to a Neglected Factor", read by invitation before the Indianapolis Society of Prosthetic Dentistry. The helpful criticism of the secretary of the Society, Dr. Chester Miller, is hereby acknowledged.

In both laughter and speech the characteristic physical condition is that of relaxation; but this is just the opposite of the condition of the speech muscles during the prehension, the mastication and the deglutition of food. It is important to bear this fact in mind in connection with the use of full artificial dentures, as the requirement of undue tension or constriction on the part of any portion of the speech musculature for the retention of the dentures, although not materially affecting the primary use of these muscles, may however result, not only in the restriction of normal laughter, but may promote disturbances of the brain centers concerned with the motor images of speech; and the prosthetist, by changing the manner in which any part of the speech musculature performs its functions, may produce a corresponding change in the cerebral reaction in relation to silent speech—the peculiar phenomena associated with verbal thought, and which is so strikingly characteristic of the motor image type of mind.

The problems arising in prosthetic dentistry are being studied in the light of many sciences. I have been unable to find any literature dealing with the effect of artificial dentures on the subjective phases of speech, and therefore the view presented may be considered uncommon. This view may be summarized as follows:

Laughter and speech are purely human characteristics, and both require for their normal functioning conditions of ease and relaxation.

Speech is not a mere matter of enunciation and pronunciation, but is primarily a psychologic process.

Thought and speech are concomitant in their origin and development; according to some authorities they are inter-dependent in their manifestation or exercise.

The organs and muscles used by man in the prehension, the mastication and the deglutition of food are all more or less involved in laughter and speech.

The tongue and the muscles of the mouth and throat are exercised more intensively and extensively in connection with laughter and speech than for any other purpose.

Whatever interferes with the freedom of the tongue and the muscles of the mouth and throat will interfere with laughter and speech.

An interference with the freedom of laughter in some cases may result in serious consequences to the health of the individual, affecting both his physical and mental welfare.

An interference with the normal action of the organs and musculature of speech may in some cases prove detrimental to the corresponding psychic processes.

Artificial full dentures, in their retention and manipulation, frequently involve an unnatural use, always a new use, of the tongue and the muscles of the mouth and throat, thus at times restricting and constricting the musculature of laughter and speech and interfering with their proper functioning.

Although the foregoing is concerned only with artificial full dentures, it is clear that whatever applies to them will apply to partial dentures to the degree in which they interfere with the freedom of these musculatures.

The whole subject presents an interesting problem, requiring for its solution the collaboration of the dentist, the speech specialist and the psychologist. Many edentulous persons provided with artificial full dentures are not using them to the extent intended by the dentist. Some use them at meals only; others never wear them during sleep, and still others wear them only in public.

Man no longer tears with his teeth the meat he eats; he no longer gnaws the bones. With the knife and the fork he performs the first function for his teeth, and as a substitute for the second, the economic housewife scrapes the bones for the mysterious but wonderful dish of her culinary art. The fibres of roots and herbs are softened by cooking, stewing and baking; and the palatable parts of the nuts and fruits that man eats reach his table in a form that makes prehension and comminution easy and pleasing. The powerful jaw of aboriginal man is no longer in demand.

Although the primary use of the mouth and the associated organs is for the prehension and the mastication of food, it must be evident to the unbiased mind that now more than ever in the history of mankind these organs are dominated by the function of speech. This is the teaching of biology, and it accords with our every-day practical experience.

Everything should therefore be done to conserve for each individual this power of speech, for in addition to its use is the communication of thought it is frequently a necessary factor in its creation.

