Treatment planning

Introduction

The planning of treatment, along with patient/client consent, is essential for the successful outcome of dental hygiene and dental care. Oral health care treatment should be based on a process of care, including Assessment, Diagnosis, Treatment Planning, Implementation of the Plan, and Evaluation. This article will focus on the treatment planning phase of the process of care.

Treatment Plan

A treatment plan is developed after careful compilation of information. The assessment includes a structured clinical examination, complete medical and dental history, risk assessment, and an objective appraisal of the patient's/client's aspirations and expectations. This process requires methodical and scrupulous attention to detail, and open communication between the patient/client and the oral health care provider. A course of treatment agreed upon between the dental hygienist or dentist and patient/client should satisfy aspirations and expectations, and meet the perceived treatment needs. The challenge in treatment planning lies in satisfying patient/client subjectivity while meeting professional and contemporary standards in evidence-based clinical care.

A preventive approach to care should be employed, and treatment should improve oral health rather than simply react to existing problems. Treatment planning should focus on enhancing oral and total health, the prevention of disease, and freedom from pain and discomfort. Patient/client motivation is a vital prerequisite to successful care.

Traditional approaches to treatment planning have inherent worth, but new technologies offer remarkable visual aids and ease of use. New methods of treatment and concepts in treatment planning should be implemented, as we are seeing changes in the incidence, severity, and patterns of dental disease and the development of new materials and techniques. Before treatment is started, a suitable informed consent must be obtained. For such consent to be valid, the purpose, nature, likely side-effects, risks of treatment and likelihood of success must be discussed, as well as treatment alternatives.

When a patient/client consents to a plan of treatment, they should have a clear agreement with the dental hygienist and dentist. The plan should define the goals and nature of the treatment, the patient's/client's responsibility, the cost and the general level of self care commitment necessary to ensure success. Although this contract may be verbal or implied, it is wise to obtain written agreement for your records.

New approach to technology

A new technology has been developed that allows you to create a treatment plan on a computer in conjunction with your patient/client. The plan can then be recorded, animated on screen, printed or burned onto CD for the patient/client. The treatment planning and case presentation has three well-defined phases for the clinician: education, inspiration and activation or implementation of the plan. It helps to create a customized plan that is understandable and engages the patient's/client's imagination. YALTARA Software has three products available: Visual Planner, Patient Information Brochures and the Case Illustrator. I will briefly describe these components.

Visual Planner

Visual Planner (VP) is a treatment planning tool that allows schematic representations of actual treatment to be quickly created. Treatment planning within VP is divided into four main screen views, namely: Anatomical View, Intraoral View (see Fig. 1), Facial View and Montage. It is structured to enable the clinician to open specific stages of treatment or create a new treatment to add to the patients' file. Visual Planner allows procedures to be saved as animations which can be saved to a patients' file, to a gallery or burned to a CD to be taken home by the patient/client. The *Treatments screen* is where all patients'/clients' treatments are managed and selected. The clinician may create a new treatment, continue from, open or delete an existing treatment.

The Visual Planner Recording utility allows the user to record an animation of what was performed in the programme at any time. There is an animation gallery that contains a number of default animations as well as the ability for the clinician to add

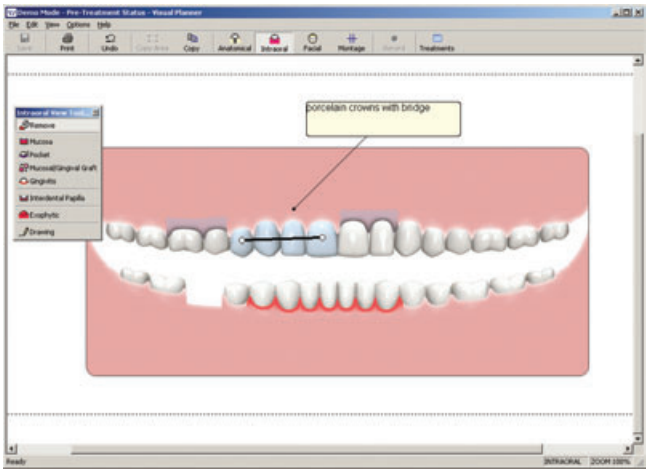

Fig 1. The Intraoral View of Visual Planner.

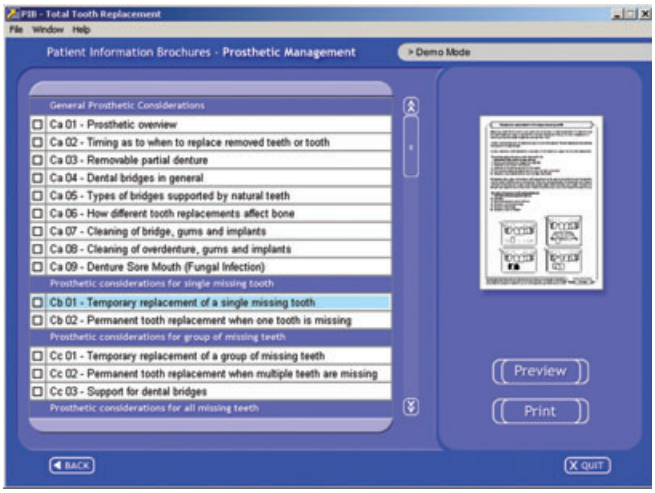

Fig 2. The Brochure selection screen within the Prosthetic Management section of PIB Total Tooth Replacement.

their own animations that can be played as desired. The *Animation Player* allows previously saved animations to be played on a stand alone PC (e.g. patients' home computer). The animation may be played at different speeds and fast forwarded or rewound as desired.

Patient Information Brochures

Patient Information Brochures (PIB) clearly presents concepts and facts leaving you free to concentrate on activating the patient's imagination to proceed with treatment. It can help to convert more patients/clients to case and treatment plan acceptance. YALTARA cites the benefits of PIB as follows:

- Improved Case Acceptance.
- Improved Case Presentation that is automatically recorded and encrypted.
- Frees the clinician to have meaningful Patient Interaction.
- Case Activation of your existing patients made easier.
- Increases the patient's understanding of Case Staging.
- Supports informed consent issues.

PIB is currently offered in two different modules: the Total Tooth Replacement Module and the Preventive Dentistry Module. In the Tooth Replacement Module a clinician can choose from over 80 patient/client information pamphlets under the headings of anatomical considerations, implant management, prosthetic management and surgical management. An example of the range of brochures covering prosthetic decisions is seen in Fig. 2, and an overview of dental implants is seen is Fig. 3.

In the Preventive Dentistry Module, the concepts and facts of preventive dentistry are presented in over 100 brochures that are easy to locate, demonstrate and printout for the patient/client. This is a wonderful tool for the dental hygienist, as these information brochures focuses on basic prevention concepts, oral cleaning, prosthetics and medical considerations to enhance understanding and to supplement your practice's protocol for patient education on preventive oral health care.

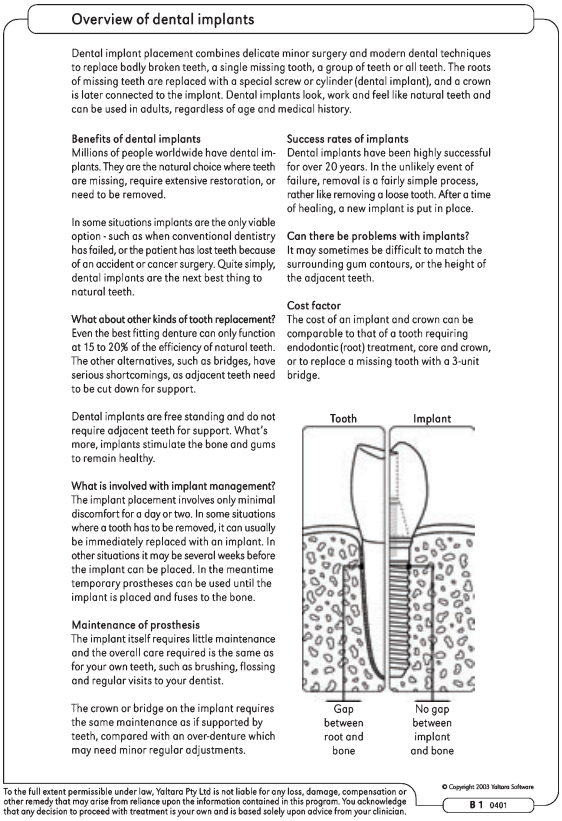

Fig 3. An example of a PIB brochure from PIB Total Tooth Replacement.

Case Illustrator

Case acceptance occurs more readily when the professional expresses concepts in a confident, natural and friendly manner. Case Illustrator helps with patient/client acceptance, and allows the clinician to select from *half a million* interactive animation combinations, with just a few clicks of the mouse, and no keyboard skills required. Case Illustrator is currently offered in two modules: Total Tooth Replacement Module and Preventive Dentistry Module.

The *Total Tooth Replacement Module* has three sections: Anatomical Considerations; Prosthetic Management; and Implant Management. Prosthetic Management is a comprehensive, interactive patient/client education tool designed specifically to demonstrate all prosthetic options that are available. The clinician chooses treatment for a single, group or all missing teeth, then interactive demos, surgical photos, X-rays, and a complete list of considerations are available for your consultation. You may print the considerations of a particular treatment option or print a summary of all the treatment options. The Implant Management section includes Temporary Prosthesis (User interactive animation showing the various temporary prosthetic options…choose from upper or lower jaw, single, group or all missing teeth and the different regions) and Implant Placement (In depth interactive animation tool that allows the clinician to show thousands of different treatment options in a cross-sectional view. Select the tooth, surgery required, tools used, hit play movie and watch the entire procedure from start to finish. Shown to the patient/client, this component emphasizes the order and progression of each procedure).

Case Illustrator *Preventive Dentistry* is divided into four main categories: Teeth Considerations, Disease Interactions, Plaque Removal and Disease Parameters.

Teeth considerations include: *Tooth Problems* (a series of animations in both 2D and 3D demonstrating Attrition, Abrasion, Caries and Erosion. Each animation may be controlled separately and the 3D animation can be rotated to any desired position while it animates); *Tooth Support Problems* (split into an animation of gingivitis and an interactive screen for periodontal disease, these illustrate the process and effects of gum disease. The interactive screen allows the user to change bone, gum and pocket levels while displaying plaque and calculus enabling clear explanations of gum disease); *Teeth Problems* (a series of animations focusing on the effects of attrition, abrasion, caries, erosion and plaque on all teeth at the one time); and Teeth Support Problems (animations demonstrating the effects of calculus, gingivitis, periodontal and mobility on teeth).

Disease Interactions shows the dynamics of plaque and the effect of food, time and hereditary has on the disease process. The clinician can select specific eating, oral hygiene, and hereditary settings and watch the resultant animation. Caries, calculus, gingivitis and periodontitis are animated in accordance with the settings made.

Plaque Removal is an excellent tool for demonstrating effective tooth brushing technique. This interactive 3D animation allows you to select and watch sites being brushed.

Disease Parameters is a comprehensive, interactive patient/client education tool. It is designed specifically to demonstrate the effects of plaque, caries, and calculus on the crown environment and gingivitis/periodontal disease on the gingival environment. Make selections that replicate a tooth's environment and condition, and then click *play* to show the effects of caries and gum disease if left untreated. You can then select an appropriate management option and click *play*. The animation then demonstrates the removal of caries/calculus and the repair of the tooth site with bone restoration if necessary.

Conclusion

We have a professional and ethical obligation to educate our patients/clients and assist them in realizing the highest level of oral health possible. We must also provide them with the highest standard of care based on the evidence and our professional clinical judgment. The link between systemic health and oral disease is gaining rapid acceptance and should be communicated. Understanding this connection allows our patients/clients to make informed decisions regarding their dental treatment, which will affect their overall well being and ultimately increase case acceptance of recommended dental treatment. Case acceptance is determined primarily by two factors: awareness and ownership of ongoing disease process; and our values/belief in the treatment plan being presented and the ability to communicate it effectively.

Awareness and ownership of oral health is increased with involvement in the process of care. During the clinical examination, educate and engage patients/clients in every stage of the process. Clarify the treatment prior to beginning any portion of the examination. Vocalize results in understandable terminology, making sure we communicate the importance of our discoveries. Including clients in the detection of their clinical health or disease elevates their understanding of the process, allows them to take possession of their disease or health processes, and ultimately increases compliance with treatment recommendations. Through reiteration at each subsequent

appointment, the importance of commitment to continuing care is reaffirmed and eventually internalized.

Your commitment to implementing new concepts into your practice will change your patient's/client's perception of value will increase practice production, decrease lost time and revenue, and increase case acceptance. By using technologies like the above software, we are now able to streamline the case presentation process. The time has come to adopt changes, set new practice goals, and benefit from delivery of high quality, evidence-based care.

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