DENTINE BONDING AGENTS

Introduction: It has rightly been said, that the only thing that remains constant in this world is change. Since the advent of time, and particularly since the dawn of the 20th century, man has been faced with the opportunity to change and improve upon pre-existing ideas and inventions in order to progress and evolve. The field of Dental Materials has not been exempt from this challenge, and this is best reflected by the evolution seen in Dentine Bonding Agents. However, change for its own sake is unwise and unnecessary. Is it prudent to tamper with a current system if it functions adequately? In order to answer this question, we must first have a sound understanding of where we stand in the field of Dentine Bonding Agents today. How we determine improvement depends on our perception of it. In today’s times, the objectives of restorative dentistry are vastly different from those of yesteryear and we are called to challenge the pre-existing paradigm and make way for a new one. Earlier performance standards were based on the concept of longevity: the longer the restoration lasts, the fewer the number of times the tooth will require a change of restoration. Therefore, pursuing a material whose chief function is to effectively withstand the rigors of the oral environment has long held our attention. The materials commonly used for restorative purpose in order to achieve this end were amalgam, gold foil and cast restorations. However, changing times have also meant a change in objective: Increasing public awareness of tooth-colored restorations has led to a rising demand for more esthetic, biocompatible materials such as composites, glass ionomer cements and porcelain. Of all the innovative materials available today, the direct placement of resin composites has assumed its place as the current technique of choice in restorative dentistry. One of its principal advantages is its bondability to enamel and dentin, which has been made possible by the use of Dentine Bonding Agents. The advent of Dentine Bonding Agents, with its property of adherence to the tooth structure by both micro-mechanical and chemical means, has heralded a new era in the field of dentistry owing to. The formulation of this path-breaking material has been attributed to momentous contributions by great scientists like MICHAEL BUONOCORE, RAFEL BOWEN, NUBO NAKABAYASHI and FUSYAMA. Recent improvements in adhesive systems have generated a revolution in dentistry, placing adhesive restorations on the front stage. Clinicians have had to rise to the challenge of confronting this continuous and rapid change. There has also been a surge in the development of more refined and diverse restorative materials. These materials along with the new, improved bonding agents have left the clinician spoilt for choice and he is faced with the daunting aspect of determining which offers the most advantages. This Library dissertation discusses Dentin Bonding Agents, with a complete coverage of bonding systems with the hope that it will contribute to a better understanding of these systems and thus empower dental professionals with the ability to make more effective treatment and material choices. Acknowledgement: Several people have contributed towards the inception, compilation and final completion of this library dissertation and I would like to take this opportunity to gratefully acknowledge them all. Firstly, I extend heartfelt thanks to Dr. Baskar Rao, Principal of S.D.M. College of Dental Sciences and Hospital, for providing us not only with excellent facilities but also with his help at all times. I am extremely grateful to Dr. Nageshwar Rao, Head of Department of Conservative Dentistry, S.D.M. College of Dental Sciences and Hospital and my mentor for his unwavering support, guidance and invaluable suggestions which have been instrumental in the successful completion of this dissertation. I would also like to sincerely thank all the other members of the staff of the Department of Conservative Dentistry for their timely help and advice. I am grateful to Mr. Javale, (Neha, put his college designation here.. statistician, I think) for helping me with the monumental task of typing this manuscript. My sincere thanks to my parents and my sister, for being a constant source of love and encouragement without which I would not be where I am today. Lastly, but definitely not the least, I am grateful to my friends (Neha, their names come here) for their help, support and inspiration.