Effect of Atmospheric Pressure Increase on the Retention of Full Metal Crowns Using Different Luting Agents and Mixing Techniques (An In vitro study)

A

Master Thesis

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By
Ziad Ali Thabet Ahmed Abu Sief
B.D.S "MisrUniversity for Science and Technology"
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Faculty of Dentistry

Ain Shams University

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Supervisors

DR. AMINA MOHAMED HAMDY

Professor and Head of

Crown and Bridge Department

Faculty of Dentistry

Ain Shams University

DR. GEHAN FAROUK YOUNIS

Assistant Professor in Crown and Bridge Department

Faculty of Dentistry

Ain Shams University

Dedication

I dedicate this thesis to those who made great contributions in my life; To my Mother, her constant love and care made me the person I am now, I owe her everything.
To the Soul of My Father , I wish I make Them proud.

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cause the periorbital and ocular blood vessels to engorge, leading to edema and possible subconjunctival bleeding.

Hess 2003[32] Mentioned that Tooth squeeze, or dental barotrauma, develops when gas in the dental pulp is compressed or a small pocket of air is left after filling. There is no specific treatment and the pain will dissipate with time. Give analgesics for severe pain. A dentist familiar with diving can help rectify the problem and prevent reoccurrences by replacing the defective filling.

Nakayama et al 2003[59] cleared the status of recreational scuba divers in Japan for promoting safety in recreational diving. A five year (from 1996 to 2001) questionnaire survey was performed of Japanese divers at the Osezaki area in Japan. Survey included diving instructors and recreational divers. Based on the obtained data, they investigated the theory predicted incidence of decompression sickness (DCS) among Japanese recreational divers. They concluded that: investigation showed that the status of leisure diving in Japan is still serious, because DCS would be expected to occur once a weekend in Japan. It is speculated that many divers may develop DCS while moving through high altitudes after diving, particularly at the Osezaki diving spot in Japan. Based on the results of this study, it is emphasized that every Japanese leisure diver should take an increasing interest in the safety of diving activity.

Broussard 2004[13] discussed the role of oxygen in wound healing, as well as the effects of hyperbaric oxygenation to promote wound healing, and focused on the use of hyperbaric oxygenation to treat foot wounds in patients with diabetes. A review of salient literature to support the use of hyperbaric oxygenation as a viable adjunct to healing foot wounds in patients with diabetes is provided, and discusses appropriate patient selection for treatment

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Introduction

Water covers about 74% of earth, the Red sea from north to south is the best area in the world in diving because it offers divers multitude of reef, walls, wrecks and an abundant marine life, with excellent visibility, with the water temperature rarely dropping below 20^{o}C in the winter and averages between 24-28^{o}C in summer.

Increased people's desire in invading the underwater world creates a new era of diving medicine, specialty due to physiological and pathological conditions caused by the great variant between the sea pressure level and underwater pressure level during diving. Now a day's also **hyperbaric medicine**, also known as **hyperbaric oxygen therapy** (HBOT); which is the medical use of oxygen at a pressure higher than atmospheric pressure - is widely worldwide used, and a several therapeutic principles are made use of in HBOT.

The increased overall pressure is of therapeutic value when HBOT is used in the treatment of decompression sickness and air embolism. The Undersea and Hyperbaric Medicine Society "UHMS" approved for reimbursement diagnoses for application of HBOT in hospitals such as: Air or gas embolism, carbon monoxide poisoning, carbon monoxide poisoning complicated by cyanide poisoning, clostridal myositis and myonecrosis (gas gangrene), crush injuries, compartment syndrome, and other acute traumatic ischemia's, decompression sickness, enhancement of healing in selected problem wounds, exceptional blood losses (anemia). Similarly, intracranial abscesses, necrotizing soft tissue infections, osteomyelitis delayed radiation injuries (soft tissue and bony necrosis), skin grafts and flaps (compromised), and thermal burns.

Clinically, environmental pressure cycling has been found to be associated with barotraumas and barodontalgia. Barotrauma is the