

G51 How to Deliver Sub-Optimal Dental Care Effectively

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After attending this presentation, attendees will be aware that in some critically-ill patients that require emergent dental care, decision trees have to be modified to suit the situational parameters.

This presentation will impact the forensic science community by increasing awareness of how common compromised care is in North America. Approximately one-half of patients do not see a dentist. Populations in North America are aging and these patients are attending acute-care hospitals for treatments such as heart valve surgery, cardiac assist devices, immunosuppressive chemotherapy, and multi-organ transplants. If half of the patients do not have regular dental care, then many of these critically ill patients, and the attending professionals, will face complex and medically risky decisions at critical junctures in their medical management.

The American Society of Anesthesiologists (ASA) patient risk and severity classification extends from "I" to "V," with the former being healthy and the latter unlikely to survive 24 hours. This presentation discusses four patients in the ASA IV and V classes that required urgent and immediate ameliorative dental care while they were in medical crises.

The first patient, a 23-year-old female, had anti-NMDA receptor encephalopathy, was unconscious, had a tracheostomy, was ventilated, had epileptiform seizures, had bitten the end of her tongue off, avulsed all or parts of three teeth, dislodged an orthodontic wire into the soft tissues of her face, and had lacerations to the inside of her mouth. She also was incapable of giving consent. With the consent of her parents, one tooth and parts of another tooth were removed in the neurology Intensive Care Unit (ICU), and her jaws were wired together to prevent further laceration. This procedure was performed to prevent the possibility of aspiration and reduce the risk of further soft tissue injury. The procedure was performed two more times on later occasions.

A second patient, a 49-year-old male with non-ischemic cardiomyopathy awaiting urgent placement on a Left-Ventricular Assist Device (LVAD), had not seen a dentist in 25 years. He could not be moved from Cardiac ICU (CICU) and required inotropic support. Approximately ten clinically infected teeth were removed and hemostasis was gained in CICU without transporting the patient to dentistry. Non-infected carious teeth were not removed. Removal of sites of infective foci is imperative in heart transplant patients receiving the bridging technology of LVAD.

A third patient, a 48-year-old male, had end-stage coronary artery disease with one coronary vessel having 100% blockage and another having 80% blockage. His coronary surgery was canceled while he was lying on the operating table by an observant anesthesiologist who observed that the man had a suppurating dental infection. The patient required extraction of seven infected teeth in the cardiac care unit to prevent endocarditis and to remove this budding space infection.

A fourth patient, a 67-year-old ventilated but awake female lung transplant patient, was seen one day after lung transplant. Her front teeth had been avulsed by an anesthetist, but "some" roots were left inside her jaw. She was in transplant ICU. Her husband had her dental chart, X-rays, and the avulsed bridge for inspection. With the aid of her dental records, further treatment was avoided until she became well enough to attend the dental clinic.

Critical elements of these cases include: (1) the emergent nature of the situation and recognition that "doing nothing" is doing something, and is not an option; (2) the importance of gaining consent from the patient or next-of-kin; (3) using the minimal amount of sedation/anesthesia and performing the procedure with close medical monitoring as near to the patient unit as is feasible; (4) the immediate goal of treatment in these individuals is, by definition, suboptimal — removal of infection and prevention of harm is the goal; and, (5) preparing the patient for definitive treatment in the appropriate dental clinic when their medical condition improves and progresses to lower levels on the ASA scale.

In the decision tree for these patients, the principles of non-maleficence (the duty to not cause or increase the risk of pain and suffering, incapacitation, or deprive others of life) and beneficence (the need to contribute to the critically ill patient's welfare) were maintained in all four cases. Evaluation of the clinical and legal aspects of these cases revealed that they fulfilled the principles of non-maleficence and beneficence, even though the care was sub-optimal.

Dentistry, Medically-Compromised, Decision Trees