

To Err is Human, But Failing to Attempt is Negligence: The Hidden Perspectives That Limit Intravenous Antibiotic Administration During Third Molar Surgery in General Practice

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Dear Editor,

The expected bacteremia at a surgical site in chronic infections enforces dentists to prescribe antibiotic prophylaxis (1,2). The second best choice for administering antibiotics during ill health is the intravenous (IV) route that eventually aids dental professionals during prolonged surgical procedures (3). The prospective reports show controversial statements, sometimes blaming oral-maxillofacial surgeons and general dentists (GD's) for the complications or infection rates (4). Despite their incompetency, why GD's should be encouraged to practice third molar surgery? If answer to this quest is yes, then there is no need to explain further the suggested title. With the positive intention to produce next generation dentists, it is essential that GD's gain equal experience.

Oral antibiotic prophylaxis has been the golden standard in healing wound infection. However, this practice is impractical for individuals with difficulty in swallowing and the immunologically compromised ones (1,3). An IV antibiotic dose will serve the purpose but its error prone nature alarms the dentists during administration. Medication errors are common in IV route, which might arise during prescription, preparation or administration of a drug. The underlying factors of delivering IV antibiotics at constant rate could refrain GD's

from using it often. A Malaysian study shows that injecting drugs rapidly is the most common IV error (5). The ability of the drugs to reach the target (surgical site) immediately and the irreversibility once injected prompt the GD's to switch over oral delivery. Furthermore, a high potential to cause thrombosis and hypersensitive reactions could be other hidden barriers. Adverse reactions could develop immediately (vasovagal episode) following the onset of injection or might occur after few hours (anaphylaxis reaction) due to respiratory distress. Prior to prescribing an IV medication, the dentists must be certain that they have competence and essential armamentarium to complete the job. Emergency drugs like adrenaline, corticosteroids, and chlorpheniramine should be in hand to cope with such a crisis. Definitely to sustain the oxygen saturation, a high volume oxygen apparatus (pulse oximeter) and dedicated monitoring of the patient is required to manage an anaphylactic shock. Lastly, a comprehensive medical history and the preparedness for emergencies would aid the dentists to avert and manage the complications.

As precautionary measure in Malaysian continent, Pharmaceutical Services Department, a tributary of Malaysian Patient Safety Council, has formulated Medical Error Reporting System to ensure patients' interests and promote medical education among healthcare professionals. Being at the positive side of

considering IV antibiotics, one must know the potential benefits before leaving aside the procedure completely. The physiologic mechanism of IV drug to get into rapidly in the bloodstream serves to minimise contagions at the surgical site. The earlier researchers have suggested Penicillin, Metronidazole (1g IV/ 1 hr pre-op) and Clindamycin (300mg IV/ 1 hr pre-op) in their studies considering the impelling resistance of these drugs over microflora (3). In extended procedures like third molar extraction, the presence of drug in the surgical area before and after the procedure helps minimise the infection rate. Therefore, rationalising IV application as supportive therapy would complement the surgical treatment. To conclude, a recollection of the basics in medical science and undertaking training programs can allay the fear of human errors.

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