Management of Patients with Medically Complex Dental Issues

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Introduction

Bleeding is a widespread problem that seems to affect most patients. When a patient presents to a dentist with bleeding issues, a dental problem, some common questions have to be asked before coming up with the proper medical intervention that would help them get over the situation. Some of the most necessary information required and which will prove to be necessary for the initial treatment (Halpern & Adams, 2021). The diagnosis of any bleeding issue first depends on the situation and the period in which a patient with a bleeding problem has been on anticoagulant medication. In addition, the patient should be able to describe their bleeding issues well to the healthcare provider and give a past review and experience with their past dental appointments.

In the appointment on the bleeding issue, the patient must also state their cause of bleeding and why they have chosen to be on anticoagulants instead of seeking other forms of medication that can equally be useful. Bleeding issues in most individuals have always been known to be a result of low platelets (Napenas et al., 2015). In this case, however, a patient must state categorically why they are on anticoagulants or why they are experiencing bleeding issues. For proper diagnosis, no assumption should be made on the status of this group of individuals.

Diagnostic Tests

Diagnostics tests can be completed in five main ways. The methods vary with several factors and are expressed independently following the nature of the bleeding issues that an individual presents. The first and perhaps the most important diagnostic test is the International Normalized Ratios (INR), which is critical in handling bleeding issues that are secondary and known to cause liver diseases (Appukuttan, 2016). Another important test is Aspirin and other non-steroidal anti-inflammatory agents used to determine bleeding issues by focusing on the bleeding time individual experiences. There is also the Thrombocyptopenia which focuses on two main components; the CBC with differential and which is known to give only platelet count, and there is also the bleeding time. Then there is the Anticoagulant warfarin, which aims to find the bleeding problems by evaluating the International Normalized Ratios. Lastly, the Anticoagulant Plavix and newer agents do not specifically have tests committed towards realization of the key bleeding issues that a patient might present themselves with.

Management techniques During Dental Treatment

Dental treatment is a fragile activity that requires a very important process. The processes and all activities used in the management of dental treatment should only be those that avoid severe bleeding and other fatal effects encountered during treatment of a bleeding issue. To avoid and prevent severe bleeding, certain issues must be met. Some of those factors include; ensuring the INR is way greater are than 3.5. Secondly, if the bleeding time is greater than 10 minutes and platelet count is found to be less than 60,000, then there are high chances the bleeding is defined as severe.

The bleeding parameters should always be within the above range. In any case of bleeding parameters being more than the described above, some special medical coordination must be required. For instance, a physician might be forced to increase an anticoagulant dose or give the patient a packed platelet or recommend a supplement of Vitamin K, which would be beneficial in the medical treatment. All the processes are key and are highly recommended for the patients as they would help ensure there is a swift and efficient provision of anticoagulation therapy.

Also, since there is no effectiveness in providing Plavix or fewer anticoagulants, there are still no reliable tests that would prevent the bleeding risks. Lack of appropriate testing techniques calls for blind operations; therefore, there are very high chances of having negative results; it is the mandate of the healthcare providers to increase their carefulness and should work in a way that minimizes the errors and possible risks associated with bleeding.

Furthermore, there is a group of other new oral anticoagulants known to inhibit thrombin directly. The new anticoagulants include Xarelto (rivoraxaban), Pradaxa (dabigatran), Savaysa (edoxaban) and Eliquis (apixaban). This anticoagulant achieves the purpose by simply blocking the continued generation of fibrins. Immediately after ingesting these anticoagulants, the plasma concentration is expected to be elevated to a peak of up to 2 hours. Approximately 85% of the ingested drug is excreted through the urine and is left to have a half-life of between 12-17 hours for patients who

have normal renal functions. Patients with anticoagulant issues who have to take these products must take them daily to increase the drug's effectiveness.

For drugs, like Warfarin there is no need for suspension of the various dental procedures with limited bleeding. The procedures must include conservative hemostatic procedures, which include removing granulation tissues and using substances such as gelfoam and surgical or suturing. Since these drugs have a very low shelf-life, each drug must be given the maximum much-needed surgical procedure that would be as late as possible immediately after completing the last dose of the specified drug.

Unless there is extensive bleeding, there is no reason to call for the suspension of anticoagulant therapy. However, in cases where there are risks that are interlinked to extended bleeding, the consultation of the healthcare providers must ensure there are up to 2-3 half-lives just sometimes before the surgery. Depending on the reasons that would lead to the therapy, including the unique low molecular weight of mini-heparins, the treatment should be completed in conjunction with drugs prescribed by the certified physicians.

If a hemophilic physician is administered, a properly designed test should be employed to ensure the patient remains within a safe limit and boundaries of parameters. Lastly, there should be significantly reduced pack extraction sites and physical trauma during the dental procedure. Such should be present to ensure a greatly reduced impact of local bleeding pressures that are less the same with certain coagulation procedures such as the gelfoam. During the procedure, the healthcare provider should be able to close any possible surgical sites.

During the dental procedure, the dentist is also expected to apply a lot of pressure or establish any important closures to stop the actual bleeding. The major alert should be called for to ensure prolonged bleeding or the ease of minimizing the possible trauma that would otherwise result in wedge placing within teeth for amalgam matrix. In addition, the patients should also be so cautious of multiple bruises that easily result.

Precautions/ Preventive Measures required during dental procedure

Several procedures guide the completion of the procedures used to complete dental procedures. First, the patient must be made aware of the most important lab tests that are critical before completing the vital dental procedures. The same should be done just a few days within a week towards completing the dental procedure. However, the information is only important if the aim is to have a completion of the dental procedures as first as possible. Secondly, there is a need to avoid certain types of drugs. The drugs that must be avoided elevate the drug interactions and might cause great harm to the health of the patient. Drugs such as ketoconazole and erythromycin are the most critical and are important in the inhibition of warfarin metabolism.

On the other hand, the patients must avoid all those drugs that can result in prolonged bleeding, such as aspirin or any of the non-steroidal anti-inflammatories. Also, one needs to encourage the patients always to be informed of major drug changes and the major herbal supplements and over-the-counter medications. When the patient makes a call for an appointment, the healthcare provider should always advise them to apply pressure using a cloth or a pressure gauze which ensures there is a stoppage in the bleeding site within between 10-30 minutes. If there is persistent bleeding, the patients should be asked to go for a medical check-up in the emergency room immediately.

Cardiac problems- heart murmurs, cardiac defects

To complete research on this topic of interest, certain issues must be handled. The most critical yet relevant information that would be applied before completing this defect research is mainly four. First, a person would be asked whether they had been diagnosed with heart problems earlier. Secondly, they should be asked whether they had previously had any heart problems and if the physician had even once asked them if they had any cases of prophylactic antibiotics before their dental treatment session. Lastly, the patients should be aware that the doctor did not ask if they had needed any prophylactic antibiotics before dental treatment.

Diagnostic test

The medical consultant is always required to identify all the possible heart problems that an individual can present. The type of heart problem that one has always determined is the type of antibiotics they will possibly use. Following the recent review of the American Heart Association Guidelines, some procedures changed. For instance, the prophylactic antibiotics required for dental procedures for patients with serious conditions such as murmurs were allowed to undergo dental procedures without having to depend on antibiotics.

Prophylactic Antibiotic Coverage for the Prevention of Bacterial Endocarditis

Three major diseases are often targeted when seeking treatment interventions in this scenario. The Prosthetic Cardiac Valve, Previous Infective Endocarditis, and Congenital Heart Diseases are the most common diseases of consideration. For a proper treatment of cardiac conditions, an individual is always required to have an unprepared cyanotic CHD, which includes palliative shunts and conduits which are completely meant for impairment of congenital heart defects that are interlinked to a prosthetic material or a device that when inserted during surgery would last for six months before the actual completion of the surgery.

There is also the repair of CHD residuals, which are known to be defects tp sites close to the prosthetic paths or devices known to be good in inhibiting the endothelialization process. In a case where the physician asks for prophylaxis for the dental procedure, and the patients do not meet the AHA/ADA criteria, the physician, in that case, is allowed to openly prescribe prophylaxis that only focuses on taking things in a specified direction. In such a case, the majority of the physicians are expected to be in charge of the decision that would rather be impactful to the patient's life.

Currently, prophylaxis antibiotics are not recommended for patients with any cardiac problems. However, if the patient needs a prophylactic antibiotic, the physician should consider using a specific guideline designed by the American Heart Association Guidelines. The Guideline requires that for diseases such as valvular heart diseases or congenital cardiac defects, the patient should consult their preferred physician and take into account all of the following key treatment procedures. First, they must have a standard regime which should be used as follows;

Standard Regime

Rx	Amoxicillin 500 mg
Disp	4 Tablets Sig take 4 tablets (2.0 g) 30-60 minutes before procedure
Note	1) Children 50 mg/Kg. Do not exceed adult dose 2) No second dose is required for adults or children

Standard Regime for Patients Allergic To Amoxicillin/Penicillin

*Rx	Clindamycin 150mg
Disp	4 tablets
Sig	take 4 tablets (600 mg) 30-60 minutes before the actual procedure

Or

Rx	Azithromycin 250 mg
Disp	2 tablets
Sig	Take 2 tablets (500mg) 30-60 minutes before procedure

Cardiovascular Problems- High Blood Pressure, arrhythmias

Completing a proper understanding of high blood pressure can only guide through several procedures. A patient can be treated well if certain things are understood about their blood pressure. First, the physician should always understand how high the patients' blood pressure can be. Patients should always be informed of the fluctuations in their blood pressure. Each of those fluctuations should be defined when the patients are under certain medications and taking no medications at all. In addition, the patient must also tell if they have earlier had any problems with blood pressure and if they have had any notable side effects caused by the same. While there are common medications that are always prescribed for individuals with cardiovascular problems like arrhythmias and high blood pressure, it is important to understand the patient's medications. In addition, the physician must also be aware of the recent medication changes that the patients have had. It is also crucial to understand if the patients have had any hypersensitive episodes in the recent past and if there were any instances when the blood pressure was so high that it could not be controlled. It is also important to mark the major dental treatment postponement problems that have been in existence.

The central Nervous System- Seizures, Stroke

The major diagnostic tests that are carried out for patients with stroke depend on their bleeding status. The diagnosis would only be made easy if the patient is undertaking some anticoagulants and only when they have properly assessed their bleeding status. However, the procedure is well explained by the Bleeding problems Management Protocol (BPMP). On the other hand, a test is done for seizures if the patient is unclear about their medications or seizures. In addition, it is applicable when there is poor control of the seizures, and a proper medical consultation would be needed to complete the entire procedure.

Management of Stroke During Dental Treatment

There have not been any special considerations needed to manage stroke during treatment. However, there are special cases like when the patient is forced to modify the dental treatment to a way that would encourage the perceived needs of the patient and the enormous psychological benefits that the patient would require. Besides, there is a consideration of whether there has been a loss in the function, especially if one or more of the

patient's body organs, such as the oral cavity area of the neck, are immensely affected. In such a case, some specific dental prostheses may or may not be effective; for instance, in the case of the removal of given removable prostheses, inadequate muscle tone would call for an implant.

For the seizures, the patients need to be scheduled very early in the morning when they are just from sleep and are believed to have had a good rest. All patients should be asked to take medications properly for a given number of days before the actual date of a dental appointment. Once the patient presents to a clinic, they should be questioned at the dental appointment on whether they had taken the drugs meant for them well without any mistakes. When there is ineffectiveness in the treatment, and there is permission to run the whole process in the course, the physician's primary goal should be to ensure the patients are protected and that there is no case where the patient undergoes any harm. In addition, the safety of the dentists and the staff that handles the patient is key. This is because there are instances in which the patient can attack the healthcare practitioners.

Diabetes

This is one of the fatal contemporary chronic conditions. The disease has proved to be among the biggest killers of all time globally. Even though older people are the most prone to diabetes, current studies show that even children that do not live a healthy lifestyle have currently been diagnosed with the disease (Sapra & Bhandari, 2019). The major issues considered when one is first going diabetes diagnosis include the patient's age, the type of diabetes that they are likely to be diagnosed with, and that entirely depends on the kind of lifestyle that one leads. For instance, that is dormant of exercise and consumed junk foods; they are likely to develop Type II diabetes.

A given number of individuals often determines diabetes. The main diagnostic tests that aid effective testing of the disease include fasting blood sugar, which reflects the possible control that an individual has. The parameter should read up to >126mg/ dL to ascertain the availability of diabetes in an individual's blood. Secondly, there is the random plasma glucose which when more than 200mg/dL in conjunction with symptoms such as polydipsia, polyuria, and unexplained weight loss would result in the development of diabetes. While the disease has had some given medications over the years, change in lifestyle of individuals, including embracement of exercise and change of data, remains the key changes of the disease prevalence.

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