Michelle Fernandez

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Tuesday Oral Pathology

Assignment paper

Arteriovenous Malformation

Arteriovenous Malformation is an abnormal tangle of blood vessels connecting arteries and veins that disrupts normal blood flow and oxygen circulation, this is a rare congenital vascular malformation that accounts for 1.5% of all vascular anomalies malformations it can be divided into two different affects low-flow lesions and high flow lesions. Low flow lesions are found in the capillary, lymphatic, and venous malformations while high flow are found in arterial and AVMs. An AVM can occur anywhere in the body, but brain and spinal AVMs present substantial risks when they bleed. There is a 50% of arteriovenous malformations occurrence in the head and neck, oral and maxillofacial regions. AVMs on the oral cavity are rare they pose a progressive benign disease progress with potentially life threatening complications including massive hemorrhage.

AMV can be asymptomatic and associated with pain, ulceration, bleeding or heart problems. AVMs are usually present during birth, they are commonly manifest in childhood or adolescence, lesions are often recognized clinically until the ages between 10–30 years the common signs and symptoms of AVM related bleeding can be associated with damages in neurological function, nausea, vomiting, headache, loss of balance, vertigo, AVMs can irritate the surrounding brain tissue and cause seizures, loss of vision and difficulties in speech. There is a tendency in male twice frequent than females.

Patients present with Arteriovenous Malformation have a localized swelling and gingival bleeding tendency these lesions present as a pulsatile mass, occlusal anomalies and tooth mobility. AVM’s in the oral cavity can present at any site, but most commonly in the anterior two-third of the tongue, palate, gingiva and buccal mucosa. In clinical presentations AVMs, can present through four different stages and can be scored by the severity using the ISSVA. Patients may also claim being able to hear their heartbeat within the lesion and detect a “whirring sound”.

The proper diagnosis of AVM is through complete patient history, clinical examination/ appearance, radiographs, computed tomography (CT) scans, magnetic resonance imaging (MRI), Doppler ultrasound or angiography. When taken radiographs some radiographic features of an AVM’s include a poorly defined radiolucency, with a honeycomb or soap bubble appearance. Another diagnostic aid for the evaluation of an AVMs is a positive fine needle aspiration this technique is safe, efficient and reduces the possibility of fatal or profuse bleeding

Treatment:

There is a wide range of treatments for AVM’s although they do present a challenge because of their hemodynamic characteristics and their growth modality. AVM’s need to be treated based on their histopathology, location and hemodynamic features. The surgical and drug therapy are commonly used to treat or relieving symptoms. Asymptomatic AVM’s do not require treatment but if there is association of pain, ulceration, bleeding or heart problems there is required therapeutic treatment. Surgical resection is the most common approach to treat these lesions, and surgical excision.

Management of AVMs remains challenging as total excision is required to ensure complete cure and to prevent recurrence as the remains of AVM has the potential to grow quickly and exceed pre-treatment size. Surgical excision is common however carries the risk of massive life threatening intraoral bleeding due to replacement of normal tissue with disease vessels.

Differential diagnosis of Arteriovenous malformation are vascular neoplasms, other vascular malformations and in rare cases, other neoplasms. AVM’s could be confused with hemangiomas which are characterized by rapid growth of endothelial cells followed by spontaneous involution. It is important to correctly classify and differentiate AVM from other vascular lesions for proper treatment and care. The similarities of clinical findings with other diseases or condition may lead to failure or wrong treatment and cause fatal outcomes.

The role of a dental hygienist is important to patients with AVM’S because of its severe life threatening complications associated with vascular malformations hygienists should be aware of fatal outcome so that necessary investigations should always be carried out before performing any procedures. A complete medical history and assessments should be done with patient to see any potential connections with the disease it is also the hygienist job to address major concerns.

References

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