Surgical Management of Grossly Deforming Vascular Lip Mass using Ultrasonic Scalpel: A Case Series

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INTRODUCTION

Vascular malformations present as a common congenital anomaly that is aesthetically distinct and can pose as a surgical challenge when seen in the lips. It can be subdivided into single vessel types or combined. Of all vascular malformations, varix or venous malformation is the most common. Management includes surgery with or without embolization, sclerotherapy, medications and some advocates observation for small, infantile hemangiomas. This case series will cover four patients with grossly deforming vascular malformations of the lip that were not responsive to medical management who underwent surgical excision using ultrasonic scalpel to lessen the risk of hemorrhage.

CASE SERIES

Case 1: Female child with soft, violaceous mass on the right upper lip. Tacking sutures used in the surrounding areas prior to excision.

Case 2: Young female with multiple, violaceous mass on the lower lip. Note the Satinsky vascular clamp marks (C) used to prevent bleeding in the surrounding area prior to excision using ultrasonic scalpel (B).

Case 3: Young male with multiple head and neck hemangiomas. Excision using ultrasonic scalpel was used to address the lip deformity and sutured via primary closure.

Case 4: Young female with multiple oral and buccal hemangiomas. Ligation of ipsilateral facial artery was done. Satinsky clamps also used to decrease bleeding with no post-op marks on follow up.

RESULTS

The procedure was done under general anesthesia. To lessen the hemorrhage during the operation, tacking sutures surrounding the mass was used in one case (1) and Satinsky Vascular Clamp (2,4) was used in the other two. Excision was completed using ultrasonic scalpel. Bleeding was minimal. No significant blood loss requiring transfusion on all patients and were all discharged morning after the procedure.

DISCUSSION

Vascular tumors or masses pose a surgical challenge due to its propensity for bleeding. Different techniques have been used and newer instruments are available that all serve to decrease the hemorrhage. Ultrasonic scalpel or ultrasonic dissector coagulator is a device that uses ultrasonic vibrations in a range up to 55,000 hertz to precisely cut and coagulate vascular tissues up to 7mm in diameter while minimizing damage to nearby structures. 1,2,3 For all four cases, Lidocaine with Epinephrine in 1:100,000 dilution was used as local anesthesia and hemostasis. To further lessen the risk of bleeding and to help maintain a clean surgical field especially for those with large masses, tacking sutures on surrounding borders of the mass was used in Case 1, whereas Satinsky vascular clamps were used on Cases 2 and 4, with an addition of facial artery ligation. For Case 3, mass was completely excised using the ultrasonic scalpel solely due to its small size and favorable location. Only minimal bleeding were noted and none require blood transfusion. All patients were discharged with improved condition with little to no surgical marks on follow-up, and are satisfied with the cosmetic outcome of the procedure. Ultrasonic scalpel proves to be satisfactory in the management of vascular lip masses aside from its previously documented usefulness in thyroid and other head and neck surgeries. 3,4,5

CONCLUSION

Ultrasonic scalpel is a functional instrument in the surgical management of resectable vascular lip mass. For large lesions, bleeding can be further decreased through different hemostatic techniques such as Satinsky clamps and Tacking sutures surrounding the mass, and ligation of the feeding vessel if feasible.

DISCLAIMER

The authors do not have and have not had a financial interest or other relationships in which the individual benefits by receiving a salary, royalty, intellectual property rights, consulting fee, honoraria, ownership interest, or other financial benefit in the process of making this case series.

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REFERENCE