Frazier Metallic Suction Tube: An Adjunct in Irrigation of Deep Fascial Spaces

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Abstract Once incision and drainage of fascial space abscess is performed, irrigation of deep spaces with saline and antibiotic solution should be done daily for effective elimination or reduction of infection. Various advocated aids for irrigation into deeper areas are: small pediatric nasogastric feeding tubes, French catheter, polyethylene irrigation tubes and scalp vein infusion set. All these aids have major inherent disadvantages like, they tend to kink inside the deep spaces limiting the reach of irrigating solution into deeper spaces, are not readily available in dental departments and have to be discarded after every use. Overcoming these disadvantages, a simple yet an effective method is proposed here—use of a Frazier suction tube.

Keywords Frazier suction tube · Fascial space · Irrigation · Infection

Incision and drainage are the oldest and usually the simplest surgical procedures for fascial space abscess. Incision and drainage rid the body of toxic purulent material and decompress the tissues, allowing better perfusion of blood containing antibiotics and defensive elements and increased oxygenation of infected area [1].

Once incision and drainage of fascial space abscess is performed and corrugated rubber drain is placed, irrigation

of deep spaces with saline and antibiotic solution should be done daily for effective elimination or reduction of infection [1]. There is little evidence to indicate that frequent wound irrigation hastens the resolution of infection [2]. However it does make sense to remove by irrigation bacteria, pus, clots and necrotic tissue from infected wounds as they accumulate. Often, this irrigation is distressing in the postoperative period as the tissue planes collapse limiting the reach of the irrigating solution into deeper tissue spaces.

Various advocated aids for irrigation into deeper areas are: small pediatric nasogastric feeding tubes, French catheter, polyethylene irrigation tubes [1], and scalp vein infusion set [3]. All these aids have major inherent disadvantages i.e. they tend to kink inside the deep spaces limiting the reach of irrigating solution into deeper spaces, are not readily available in dental departments and have to be discarded after every use. To overcome these problems a simple yet an effective method to irrigate deep fascial spaces is proposed here—use of a Frazier suction tube (Fig. 1).

Frazier suction tube which is easily available in oral and maxillofacial departments has a tubular shaft with a 45° bent that makes it convenient to insert into the deep fascial space for irrigation through the incision site (Fig. 2). Being metallic, it does not kink inside deep spaces thus confirming adequate and controlled flow of irrigating solution. The same tube can later be attached to suction unit for the outflow of the irrigating solution and inflammatory byproducts for effective elimination/reduction of infection. The tip of tube being blunt prevents tissue trauma when handled with caution while changing direction and advancing deeper into the spaces. The tube can be autoclaved and can be reused, which is again a cost effective solution for poor patients.

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Fig. 1 Frazier suction tube

Fig. 2 Irrigation of superficial temporal space with Frazier suction tube

The finger valve of the tube can be occluded with a finger or a medical adhesive tape which is easily available in all surgical departments. This prevents splatter of irrigating solution and cross contamination.

We routinely use this method of irrigation and suctioning during the management of fascial space infection and have found it to be very effective especially while managing deep spaces. We have observed it to be safe, effective, and convenient for controlled irrigation of deep spaces. An added observation was speedy recovery from infection thus reducing hospital stay, which again abridged economic load to the patients.

Thus we recommend irrigating of deep fascial spaces with Frazier suction tube as a cheap, readily available, safe, effective and rapid technique.

Compliance with Ethical Standards

Conflict of interest None.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

References

1. Topazian RG, Goldberg MH, Hupp JR (2002) Oral and maxillofacial infections, 4th edn. W.B.Saunders Company, Philadelphia
2. Miloro M, Ghali GE, Larsen P, Waite P (2004) Peterson's principles of oral and maxillofacial surgery, vol 1, 2nd ed. PMPH-USA
3. Nimonkar PV (2013) Simple manoeuvre to help irrigate the fascial space infections. J Maxillofac Oral Surg 12(1):120