**Scholars Journal of Applied Medical Sciences (SJAMS)** **ISSN 2320-6691 (Online)**
**Sch. J. App. Med. Sci., 2017; 5(4E):1556-1558** **ISSN 2347-954X (Print)**

(An International Publisher for Academic and Scientific Resources)
www.saspublishers.com DOI: 10.36347/sjams.2017.v05i04.064

Review Article

# Nasal vestibulitis- review of literature

**Turki al driweesh**
Faculty staff & otolaryngologist / head and neck surgeon, otolaryngology – head and neck surgery department, college of medicine, prince sattam university, Al kharj, Saudi Arabia

***Corresponding author**
Turki al driweesh
Email: dr.turki-425@hotmail.com

**Abstract:** Infections of the face, especially for the nasal area, carry more attention. This because of proximity to vital structure and propensity to vital complications. This disease commonly caused by Staphylococcus aureus bacteria. Its diagnosis usually did base on clinical finding where topical agent gives a satisfactory result. A number of vital complications were documented as a sequel of this disease that necessitates prompt treatment. Although this disease quite common, limited literature was discussing this disease. We aim here to review available literature about this disease and give conclusion regarding diagnosis and treatment.
**Keywords:** Nasal vestibulitis, Nasal furunculosis, Nasal infection, facial infection, vestibulitis

## INTRODUCTION:

Besides being the face is the most considerable part of body cosmetically, its skin and soft tissue infection carry more consideration. These because of its proximity to vital structure and possibility of the spread of infection intracranially. Nasal infection in part takes more intention because it is quite common along with that nose can harbor bacteria in its commensal form.

Nasal vestibulitis as the term defines as infection or inflammation of nasal vestibule. It can be in form of infection of the skin or pilosebaceous unit. Dahle claims that hair follicle is the site for bacterial invasion [1]. However, bacterial nasal commensal commonly by Staphylococcus aureus along with any disruption of covering epithelium blame for that. This can be caused by nose picking, nasal trauma, vigorous nose blowing or nasal foreign body residual [2]. It occurs more commonly in adulthood with a small number of cases happen during childhood [3]. Its incidence and prevalence still questionable [4]. Other factors like decreased immunity or virulence of organism may link to the development of the diseases [5, 6]. The most common causative organism is Staphylococcus aureus especially with a certain strain like Panton–Valentine leucocidin producing Staphylococcus aureus [7]. Although this disease quite common, limited literature was discussing this form of infection in the nose with no report about its prevalence and incidence [1]. Here we will discuss this disease, particularly for nasal vestibule with support with available literature.

## Diagnostic approach:

Diagnosis of the disease usually based on clinical evaluation unless complicated cases happened. Although of that, it may mimic other non-infective inflammatory process or sometimes malignancy [4, 8]. The usual presentation of patient clinically started with nasal pain and may be associated with frequent nasal crusting. Examination of the patient may show erythematous tender swelling which sometimes accompanied with nasal edema which called Rudolph sign [2, 3]. In uncomplicated cases usually no systemic sign or symptom. However, an abscess may form which may complicate the case. Infection of dangerous facial triangle – including nasal area – carry more intention because proximity to vital structure and presence of valveless venous connection which precludes to spread of infection intracranially [9, 10]. Number of complication was documented in literature like pre-septal cellulitis, orbital cellulitis, orbital abscesses, cavernous sinus thrombosis, and intracranial infection which may lead to considerable morbidity and mortality [10-12].

Further investigations were requested based on the severity of case or presence of a complication. These include laboratory orders or imaging studies.

Culture and sensitive may be ordered to determining carrier state with further details about bacterial strain to direct antibiotic therapy, especially in recurrent or reluctant cases. Imaging studies - most commonly computed tomography – not routinely requested unless serious complication suspected. The most common organism found as commensal in nasal cavity were Staphylococcus aureus, Staphylococcus epidermidis, Haemophilus influenzae, Corynebacteria, Micrococci, Streptococcus pneumonia and Viridans [13]. This carrier state influenced by multiple factors which include gender, age, dermatological condition and a job like health-worker. Although around 20% of normal people present in carrier state, its presence - especially virulent strain - linked to development of the disease, chronicity, multiple recurrences or serious infection like necrotizing pneumonia [14-16]. In one study, they show around 58% of proven infective cases has nasal carrier state which increases more in chronic and recurrent cases [7]. Furthermore, other risk factors for developing recurrent disease has been reported which include: crowded at sleep, poor hygiene, obese, family history of the same disease and defective immunity [17].

**Treatment strategies:**

Although the majority of cases present in the simple form, early diagnosis and the start of treatment is crucial to prevent later complication. Most of the time, avoidance of digital manipulation, local hygiene and topical heat compressor with aid of topical treatment like mupirocin, bacitracin or Fucidic acid give satisfactory result while systemic anti-staph antibiotics as clindamycin will be used in reluctant, severe cases [1, 3, 5, 18, 19]. Treatment length usually between 1-3 weeks and antibiotic choice will be directed based on culture and sensitivity result if no response. Surgical option reserved for complication and abscess cases [3]. In regards to the nasal decontamination strategy in the treatment of chronic and recurrent disease, there is no consensus about which regimen can be used. In literature, multiple regimens were documented which include maintaining good hygiene, using topical agent (chlorhexidine, mupirocin or Fucidic acid) or systemic antibiotic like clindamycin [7, 20].

**CONCLUSION:**

Nasal vestibulitis one of common disease encountered, however, limited data published about it especially epidemiology, complication and risk factor of disease that needs further studies in future. The diseases mostly present in a simple form where starting of topical treatment based on clinical finding were sufficient. Special virulent strain linked more frequently to the disease that emphasizes the role of decontamination of nasal carrier individuals.

**REFERENCES:**


1. Dahle KW, Sontheimer RD. The Rudolph sign of nasal vestibular furunculosis: questions raised by this common but under-recognized nasal mucocutaneous disorder. Dermatology online journal. 2012 Mar 1;18(3).
2. Shivaprakash MR, Sumangala B, Prasanna H, Yenigalla BM, Munegowda KC, Ravi D, Chakrabarti A. Nasal vestibulitis due to Nocardiopsis dassonvillei in a diabetic patient. Journal of medical microbiology. 2012 Aug 1;61(8):1168-73.
3. Sakat MS, Kilic K, Ucuncu H. Nasal Vestibular Furunculosis Presenting as the Rudolph Sign. Journal of Craniofacial Surgery. 2015 Sep 1;26(6):e545-6.
4. Rambur B. Recognizing Nasal Vestibulitls in the Primary Care Setting. The Nurse Practitioner. 1994 Dec 1;19(12):22-5.
5. Ruiz JN, Belum VR, Boers-Doets CB, Kamboj M, Babady NE, Tang YW, Valdez TA, Lacouture ME. Nasal vestibulitis due to targeted therapies in cancer patients. Supportive Care in Cancer. 2015 Aug 1;23(8):2391-8.
6. Demos M, McLeod MP, Nouri K. Recurrent furunculosis: a review of the literature. British Journal of Dermatology. 2012 Oct 1;167(4):725-32.
7. Durupt F, Mayor L, Bes M, Reverdy ME, Vandenesch F, Thomas L, Etienne J. Prevalence of Staphylococcus aureus toxins and nasal carriage in furuncles and impetigo. British Journal of Dermatology. 2007 Dec 1;157(6):1161-7.
8. Badran K, Rapado F, Simo R, Carpentier JD. Squamous cell carcinoma of the nasal vestibule presenting as chronic vestibulitis. Hospital Medicine. 2004 Oct;65(10):624-5.
9. Agarwal ML. Cavernous sinus thrombophlebitis due to a boil on ALA NASI. Indian Journal of Ophthalmology. 1967 Sep 1;15(5):189.
10. Ghosh D, Khanna S, Baruah DK. Ophthalmological manifestations of ENT diseases: An overview. Indian Journal of Otolaryngology and Head & Neck Surgery. 2013 Jul 1;65(3):197-202.
11. Mahasin Z, Saleem M, Quick CA. Multiple bilateral orbital abscesses secondary to nasal furunculosis. International journal of pediatric otorhinolaryngology. 2001 Apr 27;58(2):167-71.
12. Rohana AR, Rosli MK, Nik Rizal NY, Shatriah I, Wan Hazabbah WH. Bilateral ophthalmic vein

thrombosis secondary to nasal furunculosis. Orbit. 2008 Jan 1;27(3):215-7.
13. Haug RH. Microorganisms of the nose and paranasal sinuses. Oral and maxillofacial surgery clinics of North America. 2012 May 31;24(2):191-6.
14. Laifer G, Frei R, Adler H, Fluckiger U. Necrotising pneumonia complicating a nasal furuncle. The Lancet. 2006 May 13;367(9522):1628.
15. Masiuk H, Kopron K, Grumann D, Goerke C, Kolata J, Jursa-Kulesza J, Giedrys-Kalemba S, Bröker BM, Holtfreter S. Association of recurrent furunculosis with Panton-Valentine leukocidin and the genetic background of Staphylococcus aureus. Journal of clinical microbiology. 2010 May 1;48(5):1527-35.
16. Emonts M, Uitterlinden AG, Nouwen JL, Kardys I, de Maat MP, Melles DC, Witteman J, de Jong PT, Verbrugh HA, Hofman A, Hermans PW. Host polymorphisms in interleukin 4, complement factor H, and C-reactive protein associated with nasal carriage of Staphylococcus aureus and occurrence of boils. Journal of Infectious Diseases. 2008 May 1;197(9):1244-53.
17. El-Gilany AH, Fathy H. Risk factors of recurrent furunculosis. Dermatology online journal. 2009 Jan 1;15(1).
18. Reich D, Psomadakis CE, Buka B. Folliculitis. InTop 50 Dermatology Case Studies for Primary Care 2017 (pp. 149-154). Springer International Publishing.
19. 19. Luelmo-Aguilar J, Santandreu MS. Folliculitis. American journal of clinical dermatology. 2004;5(5):301-10.
20. Davido B, Dinh A, Salomon J, Roux AL, Gosset-Woimant M, Pierre I, Perronne C, Bernard L. Recurrent furunculosis: Efficacy of the CMC regimen—skin disinfection (chlorhexidine), local nasal antibiotic (mupirocin), and systemic antibiotic (clindamycin). Scandinavian journal of infectious diseases. 2013 Nov 1;45(11):837-41.
21.