

Awareness on the management strategy of stitch abscess among dental students

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J. Adv. Pharm. Technol. Res.

ABSTRACT

Stitch abscesses are abscesses that develop following surgical procedures as a result of suture infections. Because of nonabsorbable sutures, the material reacts with connective tissue, generating adhesions around the stitch. The use of this type of material increases the risk of infection. The aim of this study was to establish awareness on the management strategy of suture stitch abscess among dental students. An online survey consisting of ten questions about suture stitch abscess along with sociodemographic factors was circulated among equal numbers of 2nd years, 3rd years, final years, and compulsory rotatory residential internship (CRRI). The data obtained from the questionnaire were transferred to Microsoft Excel and imported to SPSS software for statistical analysis. Interns are more aware about the complications and management strategy of suture stitch abscesses compared to others. Awareness on the management strategy of suture stitch abscess is important, and it helps to reduce the side effects to improve the outcomes. Educating the risk factors, signs and symptoms, and management strategy is the best way to help raise awareness.

Key words: Awareness, complication, dental students, innovation, management, suture stitch abscess

INTRODUCTION

Sutures are employed to repair open wounds, reduce infection, and accordingly minimize the formation of scars. Stitch abscesses, or abscesses caused by suture infections, are a common complication following surgical treatments. It has been difficult to tell the difference between lymph nodes that metastasize and stitch abscess or recurrence at the local site of the main tumor after surgery for malignant malignancies.^[1] Stitch

abscesses might be diagnosed with precision using ultrasonography.^[2,3]

Silk sutures react with connective tissue generating adhesions surrounding the suture which increases the risk of infections.^[4] According to past studies comparing silk suture material and polyglycolic acid, the silk suture material used in operational procedures is declining to avoid complications causing suture abscess in the wounds due to trauma, the damage of Achilles tendon, the incisions of abdomen, and liver resection surgery.^[5] The degree of inflammatory reaction in human gingival tissues varies depending on the suture material utilized. Because of bacterial adherence, silk suture generates an increased severe inflammatory response than sutures that are absorbable. As a result, employing silk sutures should raise the risk of oral mucosa suture abscesses.^[6]

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Submitted: 06-May-2022

Published: 30-Dec-2022

Accepted: 12-Aug-2022

Access this article online

Quick Response Code:



Website:

www.japtr.org

DOI:

10.4103/japtr.japtr_309_22

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How to cite this article: Bharathi R, Ganapathy D, Ahmed N, Maiti S, Pandurangan KK. Awareness on the management strategy of stitch abscess among dental students. *J Adv Pharm Technol Res* 2022;13:S432-6.

A stitch abscess is caused by an infectious reaction and pathological effects of the infectious and immunologic responses to sutures.^[7] When it comes to allergy reactions, younger people are more sensitive to allergens than older people. As a result, as foreign substances, sutures may elicit a higher allergic response in younger people.^[8] There was a strong link between the patients with allergy history and the sutural stitch abscesses. Furthermore, liver failure was linked to the development of stitch abscesses.^[9]

To minimize stitch abscesses, silk suture materials should not be employed in surgical process which includes patients with very young age, past allergic responses, or problems in the liver.^[10,11] Our team has extensive knowledge and research experience that has translated into high-quality publications.^[12-38] The aim of this current study is to evaluate the awareness on the management strategy of suture stitch abscess among dental students.

MATERIALS AND METHODS

Survey design

The survey was performed among 123 undergraduate dental students studying in a private dental college and hospital in Chennai. All the students in this study gave their voluntary consent to participate in this study. The questionnaire was given to the students. This survey was approved by the university ethical clearance committee (number IHEC/SDC/PROSTHO/21/045).

Data collection

A structured questionnaire was generated. The questionnaire consisted of eight close ends evaluating the student's awareness regarding the suture stitch abscess. It also included sociodemographic information such as name, gender, and year of study.

Questions and variables

The first part of the questionnaire included three questions about the student's sociodemographic details. The second part consisted of eight questions evaluating the student's attitude and awareness about suture stitch abscesses. The participants were given instructions to select the most appropriate answer.

Data analysis

The results were recorded and analyzed using the software SPSS by IBM Corp. Released 2015. IBM SPSS Statistics for Windows, Version 23.0. Armonk, NY: IBM Corp. Analysis of this study is expressed in terms of association of knowledge and attitude and percentage toward suture stitch abscess using the Chi-square test.

RESULTS

In this survey out of 123 students ($n = 123$), 47.15% (58)

were male and 52.85% (65) were female. In this study, 24.39% were 2nd-year BDS, 25.20% were 3rd-year BDS, 25.20% were 4th-year BDS, and 25.20% were intern BDS [Figure 1]. The graph shows awareness of various questions about stitch abscess among dental students for question 1 [Figure 2], question 2 [Figure 3], question 3 [Figure 4], and question 4 [Figure 5].

DISCUSSION

Heat, redness, swelling, and discomfort are all signs of inflammation, making superficial abscesses easy to spot. Abscesses in other parts of the body may simply create broad symptoms such as fever and discomfort.^[39,40] On physical examination, pain and soreness are common findings. A deep abscess may consume a little tube (sinus) leading to the surface and begin oozing pus.^[41]

Without treatment, an infection in your stitches can spread to other parts of your skin or body, resulting in abscess formation, cellulitis, or even sepsis.^[42] Sample discharge from infected stitches can be collected and used to help identify the bacteria causing the infection.^[43] Once a bacterial infection is confirmed, antibiotic susceptibility testing can be done to determine which antibiotics will be most effective for treating the infection.^[44] Other tests and culturing methods can be used if a fungal infection is suspected. If the infection is small or localized, an antibiotic cream can be prescribed to apply to the site. If the infection is more serious or affects a larger area, an oral antibiotic can be prescribed. The results from antibiotic susceptibility testing can be used to determine which antibiotic is best to treat the infection. A very severe infection may require intravenous antibiotics or surgical removal of any dead or dying tissue.^[45-47]

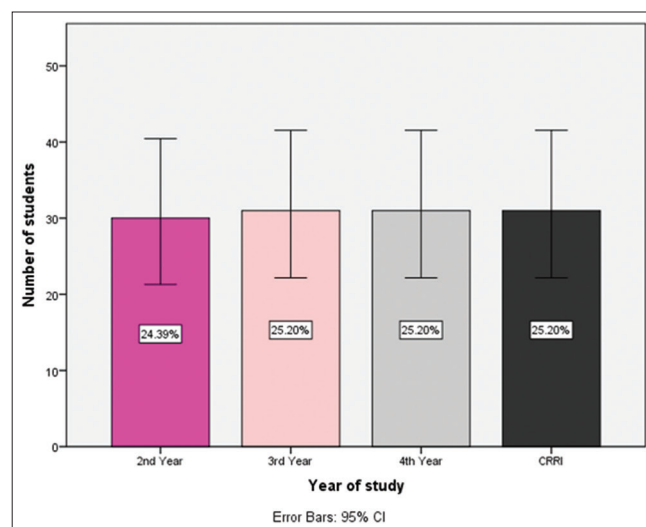


Figure 1: Bar graph shows the distribution of students with their year of study. There is not much difference in the distribution of this survey regarding the year of study

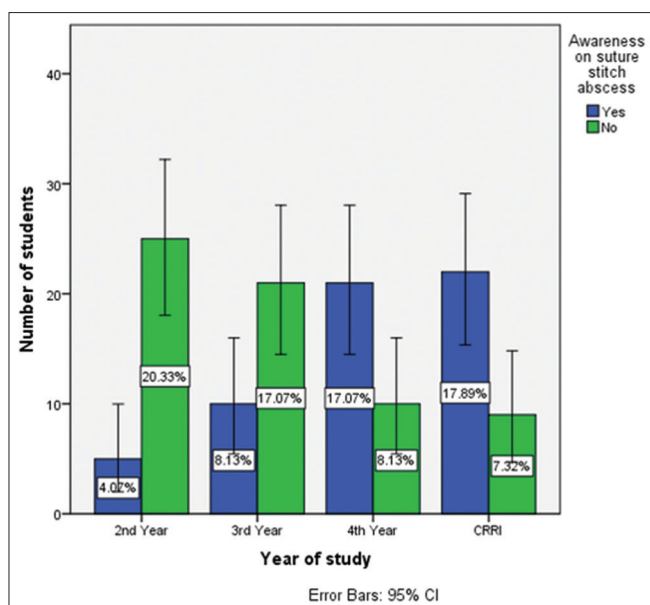


Figure 2: Bar chart shows the correlation of study year and awareness toward suture stitch abscess. Second-year BDS students have a poor awareness about suture stitch abscesses (Chi-square test [26.278^a] - $P < 0.05$, significant)

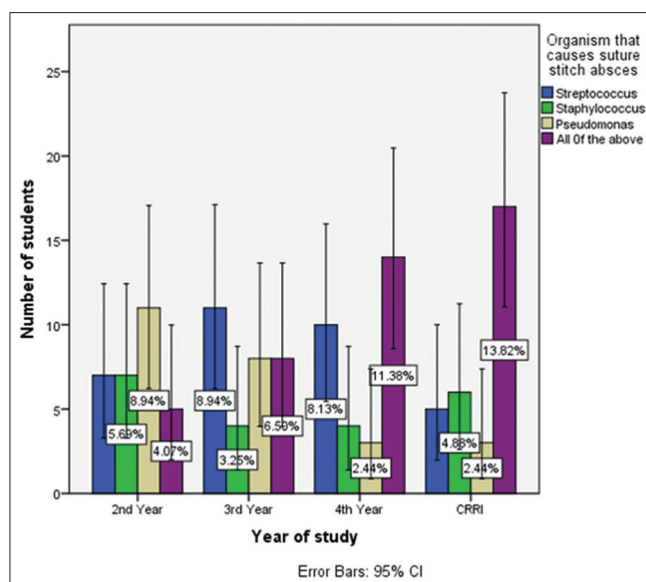


Figure 3: Bar graph shows the correlation of study year and awareness toward the organism causing suture stitch abscess. Interns have a good awareness about organisms causing the suture stitch abscess (Chi-square test [19.775^a] - $P < 0.05$, significant)

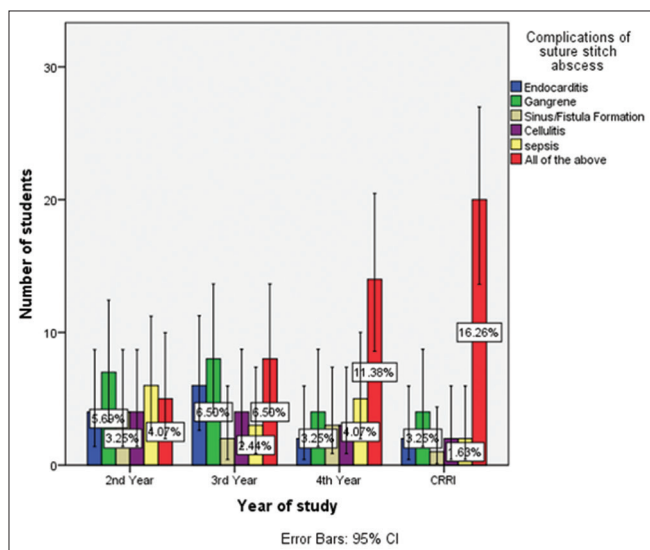


Figure 4: Bar graph shows the correlation of study year and awareness toward the complications of suture stitch abscess. Interns have a good awareness about complications causing the suture stitch abscess compared to others (Chi-square test [22.010^a] - $P > 0.05$, not significant)

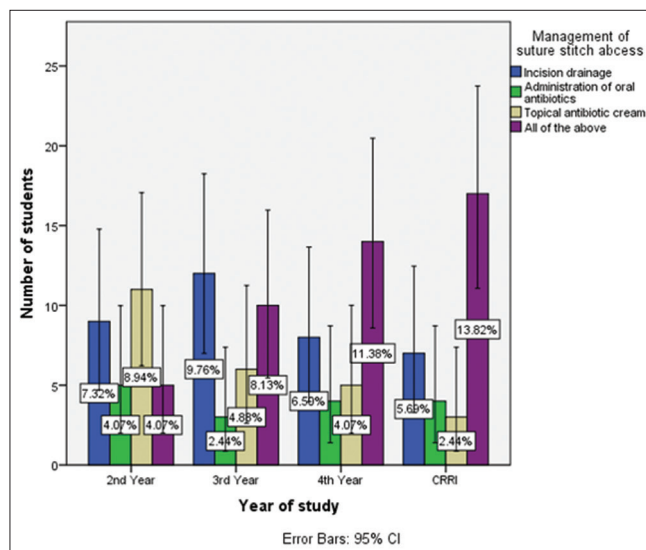


Figure 5: Bar graph shows the correlation of study year and awareness toward the management of suture stitch abscess. Interns have a good awareness about treatment options of suture stitch abscesses (Chi-square test [14.765^a] - $P > 0.05$, not significant)

CONCLUSION

Interns are more aware about the complications and management strategy of suture stitch abscesses compared to others. Awareness on the management strategy of suture stitch abscess is important, and it helps to reduce the side effects to improve the outcomes. Educating the risk factors, signs and symptoms, and management strategy to dental students irrespective of their study year is the best way to help raise awareness.

Acknowledgment

The authors acknowledge Saveetha University for all the help and support.

Financial support and sponsorship

The present study is funded by the:

- Saveetha Institute of Medical and Technical Sciences
- Saveetha Dental College and Hospitals
- Saveetha University
- Sri Balaji Transport and Suppliers PVT Ltd., Chennai.

Conflicts of interest

There are no conflicts of interest.

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