



Muhammad Hamad Saif and Muhammad Imran Qadir*

Institute of Molecular Biology and Biotechnology,
Bahauddin Zakariya University, Multan, Pakistan

Received: 04 January, 2019

Accepted: 24 January, 2019

Published: 25 January, 2019

*Corresponding author: Muhammad Imran Qadir,
Institute of Molecular Biology and Biotechnology,
Bahauddin Zakariya University, Multan, Pakistan,
E-mail: mrimranqadir@hotmail.com

Keywords: Causes; Infection; Treatment; Glanders

<https://www.peertechz.com>



Research Article

Understanding about glanders among students at Institute of Molecular Biology and Biotechnology, Bahauddin Zakariya University, Multan, Pakistan

Abstract

Objective of present study was to understand the knowledge of students about infection, causes and cure of glanders. Glanders is an infection in humans and in animals. It is a bacterial disease caused by *Burkholderia mallei*. Glanders is mainly a disease which affect on horses, and some time cats, rabbits, humans or other animals. People are infected by direct contact with infected animals. The peoples have been suffered by glanders and it affect on their nasal discharge, saliva and in urine. Important information was collected by many questions e.g. is glanders a bacterial or viral, genetic or metabolic? 200 students participated in this project.

Introduction

Glanders is an infectious bacterial disease causes by bacterium *Burkholderia mallei*. Glanders is mainly a disease of affected on horses. Glanders is not normally present in united state. Travelers can be affected by to glanders where infected animals present. Glanders is spread to peoples by directly contact with infected animals. The bacteria enter the body by passing cuts and scrapes in skin through mucosal surface in eyes or in nose. This disease is diagnosed by presenting bacterium *Burkholderia mallei* in blood, saliva, urine and skin lesions. The symptoms of glanders depend upon that how organism injected into body. Many types of infection include localization, lung infection. The treatment is limited only their infection spread in 5 to 7 days after infection. Glanders is very sensitive to others antibiotics: Tetracyclines, ciprofloxacin Novobiocin. They also have a serious symptoms specially fever, chest pain, headache, nasal discharge. Now in present days there is no vaccine is available for glanders. Prevention done by using standard and air borne precaution. The chronic infection of glanders made in involves multiple abscesses present in muscles and skin of arms, Legs, lungs, spleen and liver. If in not cure at a time then it can causes a fatal disease. Since human cases of glanders are rare, there is limited information about antibiotic treatment in humans. Vaccines are not available in market. Usually its infection spread in 7 to 10 days. So, symptoms are not show directly in body. Certain antibodies are used to cure The bacteria that cause glanders are transmitted to humans

through contact with tissues or body fluids of infected animals. The bacteria enter the body through cuts or abrasions in the skin and through mucosal surfaces such as the eyes and nose [1,2].

Objective of present study was to understand the knowledge of students about infection, causes and cure of glanders.

Materials and Methods

Total number of students were 200 in this research and the age of students was about 18-22 years. They were students of Biotechnology. A questionnaire was based upon that glanders was a bacterial disease. It is viral or metabolic and genetic disease. Many questions were raised in this questionnaire about bacterial disease it was a bacterial infection and how it affects and how it transferred into others. They were allowed to answers more than one. A student was suffered or their friends and family members many people have show different answers. Student answered that their relatives and friends were affected by this disease. The students have express different percentage in answers asked by students. They told that glanders was bacterial disease or 96.6% shows that was a bacterial disease and it was not a viral disease and it effect on both animals and humans. How they suffered by this disease and if there any family member and relative and friend, It were transferred by contacts and by blood transfusion. It appeared in animals and humans by bacterial infection. Many students have work on it and they answered in same way mostly have knowledge about

glanders. They mostly said that it transferred by contact by others or by transfusion of blood. How they were cure by using medicines or it cure by surgery and some said it had no need of treatment.

Statistical analysis

It was performed by M-Stat.

Results and Dissucion

Many students were appeared to fill the questionnaire and they were 79. They showed that 95.6% replied glanders was a bacterial disease. In others way they also said it was not genetically and metabolic diseases. Mostly said that they were not suffered by glander. It mostly occurs in animals but it also effects on humans. They produced infection in both animals and in humans. Before working on it mostly students have shown different results they also have been working on a bacterial disease glanders which spread in both animals and humans.

Table 1: Questionnaire to evaluate awareness about etiology of glanders

Glanders is a	Yes	No
• Viral disease	2.56%	97.44%
• Bacterial disease	97.43%	2.57%
• Fungal disease	3.85%	96.15%
• Genetic disease	11.53%	88.47%
• Metabolic disease	6.41%	93.59%
Ever suffered from Glanders		
• You	2.57%	97.43%
• Your family member	2.57%	97.43%
• Your relative	12.83%	87.17%
• Your neighbor	7.69%	92.31%
• Your friend	7.69%	92.31%
Glanders is transmitted by		
• Contacts or blood transfusion	48.71%	51.28%
• From parents to offspring	7.69%	92.30%
Glanders may be treated by		
• Medicines	88.46%	11.53%
• Surgery	30.76%	69.23%
• No need of treatment	8.97%	92.1%

97% students said, glanders was a bacterial disease and only 2% students replied that was a viral disease. And it was infected by special bacterial specie. They also told that only 5% have their family and friends. Some said it transferred by contact or 48.71% by blood transfusion. Mostly out of them said that it have no required to cure but 88.46% that it treatment by using antibiotics or medicines. Questions based studies have been proved very important tools for research (Table 1) [3-10].

Conclusion

It was concluded that most of the students were aware about the disease.

References

1. Howe C, Miller WR (1947) Human glanders: report of six cases. *Annals of internal medicine* 26: 93-115. [Link: https://tinyurl.com/yar4aeze](https://tinyurl.com/yar4aeze)
2. Srinivasan A, Kraus CN, Deshazer D, Becker PM, Dick JD, et al. (2001) Glanders in a military research microbiologist. *New England Journal of Medicine* 345: 256-258. [Link: https://tinyurl.com/yd6uuoga](https://tinyurl.com/yd6uuoga)
3. Qadir MI, Javid A (2018) Awareness about Cohn's Disease in biotechnology students. *Glo Adv Res J Med Medical Sci* 7: 062-064. [Link: https://tinyurl.com/yanh5mh3](https://tinyurl.com/yanh5mh3)
4. Qadir MI, Saleem A (2018) Awareness about ischemic heart disease in university biotechnology students. *Glo Adv Res J Med Medical Sci* 7: 059-061. [Link: https://tinyurl.com/y7vuo971](https://tinyurl.com/y7vuo971)
5. Qadir MI, Ishfaq S (2018) Awareness about hypertension in biology students. *Int J Mod Pharma Res* 7: 08-10.
6. Qadir MI, Mehwish (2018) Awareness about psoriasis disease. *Int J Mod Pharma Res* 7: 17-18.
7. Qadir MI, Shahzad R (2018) Awareness about obesity in postgraduate students of biotechnology. *Int J Mod Pharma Res* 7: 14-16.
8. Qadir MI, Rizvi M (2018) Awareness about thalassemia in post graduate students. *MOJ Lymphology & Phlebology* 2: 14-16.
9. Qadir MI, Ghalia BA (2018) Awareness survey about colorectal cancer in students of M. Phil Biotechnology at Bahauddin Zakariya University, Multan, Pakistan. *Nov Appro in Can Study* 1: NACS.000514.2018. [Link: https://tinyurl.com/y8zwt2pf](https://tinyurl.com/y8zwt2pf)
10. Khan I, Wieler LH, Melzer F, Elschner MC, Muhammad G, et al. (2013) Glanders in animals: a review on epidemiology, clinical presentation, diagnosis and countermeasures. *Transboundary and emerging diseases* 60: 204-221. [Link: https://tinyurl.com/y863jckt](https://tinyurl.com/y863jckt)