Journal for Research in Applied Sciences and Biotechnology

www.jrasb.com

ISSN: 2583-4053

Volume-3 Issue-2 || April 2024 || PP. 144-147

https://doi.org/10.55544/jrasb.3.2.25

Descriptive Study of Chicken Pox in the Post Graduated Hospital Khost Afghanistan

Zabit Khan Naibzai[1], Naim Khan Zadran[1], Sherzad Gul Sharif[2] and Zafar Khan[2]

[1]Lecture, Faculty of Medical, Shiakh Zayed University, AFGHANISTAN.

[1]Lecture, Faculty of Medical, Shiakh Zayed University, AFGHANISTAN.

[2]Lecture, Faculty of Medical, Shiakh Zayed University, AFGHANISTAN.

[2]Internal Paediatric Department, Khost Post Graduate Hospital, AFGHANISTAN.

[1]Corresponding Author: drzabitkhannaibzai@gmail.com

www.jrasb.com || Vol. 3 No. 2 (2024): April Issue

Received: 17-04-2024	**Revised:** 19-04-2024	**Accepted:** 26-04-2024

ABSTRACT

Chicken pox is an acute infectious disease of viral etiology, characterized by the appearance of characteristic blistering rash against the background of a general intoxication syndrome. [13, 14] The causative agent of chickenpox is the herpes virus type 3, transmitted from a patient by airborne droplets. Chickenpox is one of the most common childhood infections. It is manifested by characteristic abundant itchy blistering rashes that appear at the height of fever and general infectious manifestations. [15, 16] A typical clinic allows you to diagnose the disease without conducting any additional research. Treatment of chickenpox is mainly symptomatic. To prevent secondary infection, antiseptic treatment of rash elements is recommended. Infants and Children are affects in all ages, but most severely infants, who experience the highest age-specific incidence and account for almost all Chickenpox hospitalizations and deaths. [17, 18, 19]

Research Goal: Case of Chickenpox in the Khost post graduated hospital from the 1399/06/01 to 1399/12/30.

Methodology: This is a descriptive study that was conducted in the form of a case series. This study was conducted on 43 patients affected by chicken pox.

Keywords- Chickenpox, vaccine, vaccine-preventable diseases, prevention, complication.

I. INTRODUCTION

Chickenpox is caused by the Varicella Zoster virus of the herpesvirus family, also known as human herpes virus type 3. This is a DNA-containing virus, little stable in the external environment, capable of replication only in the human body. [1] Inactivation of the virus occurs quite quickly when exposed to sunlight, ultraviolet irradiation, heating, and drying. The reservoir and source of chickenpox are sick people during the last 10 days of the incubation period and the fifth to seventh day of the rash period. [2]

Chickenpox is transmitted through the aerosol mechanism by airborne droplets. Due to the weak resistance of the virus, contact-household transmission is difficult to implement. [24] The spread of the virus with patients when coughing, sneezing, talking, is possible. [3]

People have a high susceptibility to infection; after suffering from chickenpox, intense lifelong immunity remains. Children in the first months of life are protected from infection by antibodies received from the mother. Chickenpox most often affects children of preschool and primary school age who attend organized children's groups. [25]

This disease is a viral disease that occurs in hot climates in 90% of cases in children, especially in children under the age of ten. Since this disease is more common in hot and humid areas, Afghanistan has a semi-arid climate. [21]

II. PATHOGENESIS OF CHICKENPOX

The entry point for infection is the mucous membrane of the respiratory tract. Subsequently

Journal for Research in Applied Sciences and Biotechnology

www.jrasb.com

ISSN: 2583-4053

Volume-3 Issue-2 || April 2024 || PP. 144-147

https://doi.org/10.55544/jrasb.3.2.25

spreading to regional lymph nodes and further into the general bloodstream. [20, 21] The varicella zoster virus has an affinity for the epithelium of integumentary tissues. [22, 23] Replication of the virus in the epithelial cell contributes to its death, cavities remain, filled with exudate a vesicle is formed. Chickenpox rashes can form both on the skin and on the mucous membranes, where the vesicles quickly progress to erosion. [7, 8 ,9]

III. COMPLICATIONS OF CHICKENPOX

Complications are observed in no more than 5% of patients. diseases caused by secondary infection predominate: abscesses, phlegmon, and in severe cases, sepsis. A dangerous complication is viral pneumonia. Some others are keratitis, encephalitis, myocarditis, nephritis, arthritis, and hepatitis. [10, 11, 12]

IV. RESEARCH QUESTION

What was the frequency and pattern of Chicken Pox incidents in the last six months of 1399 Hejri Shamsi in Khost post graduated hospital?

V. IMPORTANCE OF RESEARCH

Chicken Pox is an extremely contagious disease that can cause death after complications. It causes various complications in different body systems, such as encephalitis, meningoencephalitis, myelitis, polyneuritis. Toxic shock, vesicular lesion, sepsis, cutaneous abscesses, impetigo. The importance of research is that to Prevent or treat complications in time. A dangerous complication is viral pneumonia. some others are keratitis, encephalitis, myocarditis, nephritis, arthritis, and hepatitis.

VI. BENEFITS OF RESEARCH IN THE HEALTH SYSTEM

Since chicken pox is the cause of serious complications in childhood, therefore, efforts should be done to prevent this disease, if the disease occurs, it should be prevented in time from complications or reduced to a minimum.

There are some bad traditions in our society, so the society should be informed about the dangers and prevention of this disease through radio and other media. In the field of treatment and identification of diseases, it is necessary to carry out comprehensive research on the cause and causes of this disease, on time diagnosed and treatment of this disease will cause reduction of complications and prevention of permanent disabilities.

Table 1: percentage of chicken pox patient among all admitted patients.

All admitted patient	Chicken pox affected patient	Others patient
2310	43	2267
100%	1.86 %	98.14 %

Table 2: percentage of chicken pox patient among All communicable disease patients.

All communicable disease patients	Chicken pox affected patient	Others patient
435	43	1832
100%	9.88 %	90.12%

Table 3: percentage of chicken pox patient according to sex.

Chicken pox affected patient	male	female
43	18	25
100%	41.87 %	58.13 %

Table 4: percentage of chicken pox patient according to age.

Chicken pox affected patient	More 10 year	Less 10 years
43	10	33
100%	23.26 %	76.74 %

Table 5: percentage of chicken pox patient according to residency.

Chicken pox affected patient	Center	Suburban area
43	17	26
100%	60.47 %	39.53 %

Table 6: percentage of chicken pox patient according to residency.

Chicken pox affected patient	Complications	Without complications
43	33	10
100%	76.74 %	23.26 %

VII. LITERATURE REVIEW

Nigeria:

This is a descriptive study conducted by Akinola A, Faliregun, Ayodejis Adebowale, Adeniyi F at the Sanitation City Research Center in Nigeria from 2010-2015. In this study, 7361 children who were suspected of having chicken pox disease were studied. 91 percent of these patients were suffering from chicken pox, of which 63 percent of patients had complications. 40 (63.4%) of them are men and 23 (35.6%) are women and 98% of them have improved after treatment. [4]

ISSN: 2583-4053

Volume-3 Issue-2 || April 2024 || PP. 144-147

https://doi.org/10.55544/jrasb.3.2.25

Pakistan:

This study was conducted in Pakistan in 2014 at Nauman Ahmad Jahangi Khan Ihsan Fuji Medical College, Sindh, Karachi, including 305 patients, 55 percent of whom were vaccinated. Among these patients, 199(65%) had complications, of which 130 (63%) were male and 69 (37%) were female. 285 (93 %) of them were cured. [(5)]

Herzegovina:

This descriptive study was done in 2012 in tertiary health center University of Sarajevo, Bosnia-Herzegovina. During this period a total of 11,197 patients were admitted to the Infectious Diseases ward. Among them 333 (2.9%) patients had a chickenpox [197 adults (59%), 136 children (41%]. The average rate of hospitalization for this period was 10.7/100,000. The age range was 1 to 48 years. For adults it was 19 to 48 years, with a mean of 33 years, and for the children it was 1 to 18 years, with a mean of eight years. Anamnestic data taken from the patients showed positive contact with chickenpox in similar percent for both groups. None of these patients received chickenpox vaccine. [(6)]

VIII. DISCUSSION

1. Our research was conducted on inpatients in Khost post graduated Hospital, total inpatients were 2310, among them 435 patients were suffered from infectious diseases. Out of 435 infectious patients 43 were affected by chicken pox.
2. According to age, the incidence of chicken pox disease was higher in children, which may be due to lack of public knowledge and vaccination.
3. From the point of view of gender, most of the cases of chicken pox have occurred in male, among them 18 were male and 25 were female.
4. According to residency, most cases of chicken pox were in the suburban areas, out of 43 patients, 26 were in suburban areas and 17 were related to center.
5. from the point of view of the season in research of different countries, it has been found that the incidence of chicken pox increases in spring and autumn, and in our research, the incidence of chicken pox increases in winter.
6. From the point of view of vaccines, most cases were seen in children who were not vaccinated.

IX. CONCLUSION

1. In our study, total of 43 chicken pox patients were investigated, 25 (58.13%) of whom were male and 18 (41.86%) were female. We compared this index with Nigeria, there were 40 (63.49%) males and 23 (36.50%) were female. we compare it with Pakistan, there were 193 (63.27%) males and 112 females. However, this indicator was not investigated in Herzegovina.
2. Hospitalization and complications were more in children than in adults. In our research 33 (76.74%) cases were in children and 10 (23.25%) of them were in adults. We compared the same index with Nigeria, in which 63 (18.91%) were complicated patients. Among them 40 (63.4%) are male and 23 (35.6%) are female, and we also compared it with the country of Pakistan, among these patients, 199(65%) had complications, of which 130 (63%) were male and 69 (37%) were female.
3. In Afghanistan, mortality rate is high due to the lack of chicken pox vaccine, but in other countries, the mortality rate is low due to in vaccination.

PROBLEMS DURING RESEARCH

1. There is no special research center and well-equipped laboratory equipment for research.
2. Non-availability of a standard infectious control services for all patients.
3. Due to lack of beds and Increase in the number of patients, sometime two patients admitted in one bed.
4. The low level of education of the society and the referral of patients to non-professionals people.
5. Absence of digital database record system in hospital.

SUGGESTIONS

1. In order to reduce the incidence of disease, patients should be treated according to international regimens and systems.
2. All the complications that occur during or after the illness should be properly diagnosed and treated.
2. Equipped the existing laboratories, training of doctors in infectious filled in and outside the country.
3. Research should not be limited to one hospital, because this is a whole country related diseases.
4. Public awareness about vaccines should be done through radio, television and other social media, so that people do not resist vaccines.

REFERENCES

[1] Kliegman, Behrman, Jenson, Stanton editors, Nelson textbook of paediatrics 20th edition, Saunders and imprint of Elsevier, Philadelphia USA 2015. Chapter 453.3 pages; 1636-1638.

[2] Ghai OP, Paul V.K, Bagga Arvind. ESSENTIAL PEDIATRICS-8th Edition: 2009 REPRINT: 2010 Published By Sathis Kumar Jain CBS Publisher & Distributor Chapter: 12—Page: 318-322

[3] Akber khan perveez Basis of Pediatrics 8th Edition paramount Pabhishing Enterpris 2014 chapter 9th page 234-236

[4] A-Akinola, Faliregun, Ayodejis, Adebowal, Descriptive Study on , Epidemiology of Chicken Pox and implicated Pathogens in Soyal Society of tropical Medicine /Hygein 4th Edition 2012,

ISSN: 2583-4053

Volume-3 Issue-2 || April 2024 || PP. 144-147

https://doi.org/10.55544/jrasb.3.2.25

Nigeria,. Ch8 p133-140 (www.academic.oup.com/tistmh)

[5] Ahmad Noman,Khan Jung,Fagieh Ehsan-Descriptive Study on Chicken Pox in Sindh Medical College Published in Journal Pakistan Medical Asossiation.5th Edition2211--, Ch2 p67-98(www.jpma.org.pak/)

[6] 6.file:///C:/Users/OMID%20COMPUTER/Downloads/Characteristics_of_chickenpox_in_children_and_adul.pdf

[7] Whitley RJ. *Mandell, Douglas, and Bennett's principles and practice of infectious diseases.* 7. Philadelphia, PA: Elsevier Churchill Livingstone; 2010. Varicella-Zoster Virus; pp. 1963–1969. [Google Scholar]

[8] Miller E, Marshall R, Vurdien J. Epidemiology, outcome and control of varicella-zoster infection. *Rev Med Microbiol.* 1993;4:222–230. [Google Scholar]

[9] Gil A, Oyaguez I, Carrasco P, Gonzalez A. Epidemiology of primary varicella hospitalisations in Spain. *Vaccine.* 2002;20:295–298. [PubMed] [Google Scholar]

[10] Sauerbrei A, Wutzler P. Herpes simplex and varicella zoster virus infections during pregnancy: current concepts of prevention, diagnosis and therapy. Part 2: varicella-zoster virus infections. *Med Microbiol Immunol.* 2007;196:95–102. [PubMed] [Google Scholar]

[11] Harger JH, Ernest JM, Thurnau GR, Moawad A, Momirova V, Landon MB, et al. Risk factors and outcome of varicella-zoster virus pneumonia in pregnant women. *J Infect Disease.* 2002;185:422–427. [PubMed] [Google Scholar]

[12] Nguyen HQ, Jumaan AO, Seward JF. Decline in mortality due to varicella and implementation of varicella vaccination in the United States. *N Engl J Med.* 2005;352:450–458. [PubMed] [Google Scholar].

[13] Galitskaya, M.G. Chicken pox: possibilities of combating the "old enemy" in the practice of a pediatrician / M.G. Galitskaya, A.G. Rumyantsev // Zaporozhye medical Lectures 29 INTERNATIONAL REVIEWS: clinical practice and health 2 2017 Qing journal. – 2010. – T.9, No. 5. – P.99–102.

[14] Krasnova, E.I. Hemorrhagic form of chickenpox in children and its outcomes (based on our own observations), possibilities of prevention / E.I. Krasnova [and others] // Attending physician. – 2012. – No. 3. – P.26–31.

[15] Baranov, A.A. Prevention of chickenpox by means of specific prophylaxis in Belarus, Kazakhstan, Russia and Ukraine / A.A. Baranov [et al.] // Pediatric pharmacology. – 2008. – T.5, No. 3. – P.6–14.

[16] Rumyantsev, A.G. Efficiency and safety of vaccination against chickenpox in children / A.G. Rumyantsev // Zaporozhye Medical Journal. – 2011. – T.4, No. 5. – P.11–16.

[17] Nikiforova, L.V. Modern features of the clinical course of chickenpox in children / L.V. Nikiforova [and others] // Zaporozhye Medical Journal. – 2011. – T.13, No. 4. – P.122–123.

[18] Cahide, Y. Severe neurological complications of chickenpox / Y. Cahide, C. Hüseyin // Eur. J.Gen. Med. – 2005. – Vol.2(4). – P.177–179.

[19] Chicken pox and Pregnancy // World Health Organization [Electronic resource]. – 2014. – Mode of access: http:// http://www.cdc.gov/pregnancy/infections-chickenpox.html. – Date of access: 01/04/2016.

[20] Varicella Zoster Virus // World Health Organization [Electronic resource]. – 2013. – Mode of access: http://www.cdc.gov/vaccines/pubs/pinkbook/downloads/varicella.pdf. – Date of access: 01/04/2016.

[21] SP 3.1.2.2512-09 - "Prevention of meningococcal infection." SP 3.1.2.2512-09 - "Profilaktika meningokokkovoj infekcii". (In Russ.)

[22] Safadi M.A. Epidemiology and prevention of meningococcal infection: a critical assessment of vaccination policies / Safadi M.A., Mcintosh E.D. // Pediatric pharmacology. - 2012. - No. 1. - P. 45-64. Safadi M.A. Jepidemiologija i profilaktika meningokokkovoj infekcii: kriticheskaja ocenka politiki vakcinacii / M.A. Safadi, E.D. Mcintosh // Pediatricheskaja Farmakologija. - 2012. - No. 1. - S. 45-64. (In Russ.)

[23] Koroleva I.S. Meningococcal infection and purulent bacterial meningitis / I.S. Koroleva, G.V. Beloshitsky // — Guide to laboratory diagnostics. - M., 2007. - 107 p. Koroleva I.S. Meningokokkovaja infekcija i gnojnye bakterial'nye meningity / I.S. Koroleva, G.V. Beloshickij // - Manual on laboratornoj diagnostike. - M., 2007. - 107 s. (In Russ.)

[24] Meningococcal infection in children: clinical picture, diagnosis, treatment: textbook. allowance / G.P. Martynova [and others]. - Krasnoyarsk: publishing house KSMU, 2009. - 214 p. Meningokokkovaja infekcija u detej: klinika, diagnostika, lechenie: ucheb. posobie/G.P. Martynova [i dr.]. - Krasnojarsk: izd-vo KGMU, 2009. - 214 s. (In Russ.)

[25] Appendix No. 1 to the protocol of the board of the Federal Service for Supervision of Consumer Rights Protection and Human Welfare dated June 26, 2014 No. 5. Prilozhenie No. 1 k protokolu kollegii Federal'noj sluzhby po nadzoru v sfere zashhity prav potrebitelej i blagopoluchija cheloveka from 06.26.2014 No. 5. (In Russ.