

Disease Pattern and Outcome among Afghan Patients: Our Experience in Tertiary Care Hospital in Quetta

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ABSTRACT

There is paucity of studies focused on Afghan resident patients who come to Pakistan. These patients are either referred or come here due to lack of facilities in their home country. This study was done to show the spectrum of illness brought to Pakistan and if they were different from illnesses in their parent country.

Study Design: Descriptive Cross-Sectional Study.

Place and Duration of Study: This study was conducted at Paediatric Unit-I, Bolan Medical College Hospital, Quetta from June 2006 to May 2011.

Patients and Methods: All admitted patients who were bonafide citizens of Afghanistan were included in this study. The patients were divided into three groups to determine the frequencies of illness in each group. Percentages were calculated for various ages and diseases.

Results: A total of 4416 patients were admitted from June 2006 to May 2011, out of these 110 were Afghan patients and the rest were Pakistanis. 58.18% patients were in group I, 29 % were in group II while 14.5 % were in group III. The 34.5% were suffering from tuberculosis, 13.6% patients were malnourished, 9% had nephrotic syndrome, 10% had various malignancies, 6.6% had infectious diseases, 4.54% had haematological causes, 3.6% had celiac disease, and 4.54 % had liver disorders, while 14% had miscellaneous disorders.

Conclusion: Tuberculosis, malnutrition and infectious diseases are most common in afghan patients.

Key Words: Tuberculosis, Malnutrition, Pattern, Outcome.

INTRODUCTION

While there have been many studies on afghan refugees, there is paucity of studies focussed on Afghan resident patients who come to Pakistan. These patients are either referred or come here due to lack of facilities in their home country.¹ Afghan studies show that Tuberculosis, measles, diphtheria, and typhoid fever are other common infectious diseases.² This study was done to show the spectrum of illness brought to Pakistan and if they were different from illnesses in their parent country.³

PATIENTS AND METHODS

This descriptive cross sectional study was conducted at Paediatric Unit one BMCH. It lasted from June 2006 to May 2011. All admitted patients who were bonafide citizens of Afghanistan were included in this study. For this purpose data was analysed using files of patients admitted during the study period. All those patients who had sought refuge in Pakistan were excluded from the study. After this the patients were evaluated by a through history, physical examination and relevant investigations which were dictated by the diagnosis. The patients were divided into three groups to determine the frequencies of illness in each group. Group one consisted of patients up to the age of 60 months(5 years), group two included children from 61 months to 120 months(6-10 years) and group three

consisted of patients more then 120 months. Percentages were calculated for various ages and diseases.

RESULTS

A total of 4416 patients were admitted from June 2006 to May 2011, out of these 110 were Afghan patients and the rest were Pakistanis (Table 1). Overall the Afghan patients constituted 2.49 % of the total patients admitted over five years. The year-wise distribution is shown in table 1. The male to female ratio was 1.89:1. 58.18% patients were in group I, 29 % were in group II while 14.5 % were in group III. The 34.5% were suffering from tuberculosis, 13.6% patients were malnourished, 9% had nephrotic syndrome, 10% had various malignancies, 6.6% had infectious diseases, 4.54% had haematological causes, 3.6% had celiac disease, and 4.54 % had liver disorders, while 14% had miscellaneous disorders. Among the tuberculous patients 65.9 % patients had tuberculous meningitis, 20.45% had pulmonary tuberculosis, and 9.09 had abdominal tuberculosis while 2.27% each had bone and spine tuberculosis respectively. In the tuberculous meningitis patients 6.89% had stage I, 24.13% had stage II while 68.96 % had stage III tuberculous meningitis. 82.72% percent patients were discharged, 10% patients died and 7.27% left against medical advice.

Table No.1: Year-wise distribution of total Pakistani and Afghan patients

Year	Total	Afghan	Pakistan	%age of Afghan patients per year
2006	306	06	300	1.96%
2007	1172	27	1145	2.30%
2008	758	16	742	2.11%
2009	848	21	827	2.47%
2010	997	25	972	2.50%
2011	335	15	320	4.47%
Total	4416	110	4312	2.49%

Table No.2: Break-up of tuberculosis patients (n=44)

Break-up of Tuberculosis	No.	%age
Tuberculous meningitis	29	65.9
Pulmonary tuberculosis	9	20.5
Tuberculous spine	1	2.3
Tuberculous arthritis	1	2.3
Abdominal tuberculosis	4	9.0

Table No.3: Break-up of tuberculous meningitis patients (n=29)

Grade	No.	%
I	2	6.9
II	7	24.2
III	20	68.9

DISCUSSION

Over five years the tuberculous patients constituted only a fragment of the population. This may be because of difficulties in logistics and war like situation in Afghanistan. Since this study was focussed only on bonafide afghan citizens and did not include those who were in refugee camps or who had settled in various cities of Balochistan, therefore this percentage can be explained. Male patients were twice as much as female patients perhaps owing to cultural and religious factors, whereby boys are more likely to be treated than girls.⁴ Most of the patients were below five years of age, thus showing the increased morbidity and mortality in this age group.^{5,6} The number of patients decreased as the age increased thus showing increasing morbidity and inability of medical staff at Afghanistan to treat them.⁷ More than one third of the patients suffered from tuberculosis thus showing the high prevalence of tuberculosis in Afghanistan.^{2,8,9} Among the tuberculosis patients more than two thirds suffered from tuberculous meningitis. This shows the delay in diagnosing this condition as most of the meningitis patients came at third stage.⁹⁻¹¹ This may also be because of decreased BCG vaccination among these children.¹²⁻¹⁴ The lack of immunization and the malnourished status makes tuberculous meningitis more virulent in these patients.¹⁵ One fifth of the patients had pulmonary tuberculosis which was the second most common form of

tuberculosis.^{16,17} The third most common was abdominal tuberculosis.¹⁸ A significant number of patients were malnourished thus contributing to the increased prevalence of tuberculosis.¹⁹⁻²¹ The malnutrition was mostly primary and found in group one.

Nephrotic syndrome was also much prevalent in afghan patients, this was mostly steroid sensitive.²² One tenth patients had malignancies, mostly acute lymphoblastic leukaemia.²³ Infectious diseases and particularly measles were also a significant concern.^{24,25} The prevalence of haematological disorders especially aplastic anaemia has substantially increased since the recent war. More studies are needed to validate this. Three fifth of the patients were discharged, and mortality was only one fifth, while one fifth patients left against medical advice.

CONCLUSION

Tuberculosis, malnutrition and infectious diseases are the main diseases that are prevalent in patients referred from Afghanistan.

REFERENCES

1. Khan IM, Laaser U. Burden of tuberculosis in Afghanistan: update on a war-stricken country. *Croatian Med J* 2002, 43(2):245-7.
2. Choudhry VP, Fazal I, Aram G, Choudhry M, Arya LS, Torpeki MS. Pattern of preventable diseases in Afghanistan: suggestions to reduce the morbidity and mortality at IGICH. *Indian Pediatr* 1989; 26(7): 654-9.
3. Singh M, Qureshi MA, Aram GN, Hadi F, Atif SY, Adel SS, Arya LS, Rao JS. Morbidity and mortality in childhood in Afghanistan: a study of 40 492, consecutive admissions to the Institute of Child Health, Kabul. *Ann Trop Pediatr* 1983; 3(1): 25-30.
4. Felt JC. Spotlight: Afghanistan. *Population Today* 1988; 16(5):12.
5. Boss LP, Brink EW, Dondero TJ. Infant mortality and childhood nutritional status among Afghan refugees in Pakistan. *Inter J Epidemiol* 1987; 16(4): 556-60.
6. Bhutta ZA. Children of war: the real casualties of the Afghan conflict. *BMJ* 2002, 324: 349-52.
7. Assefa F, Jabarkhil MZ, Salama P, Spiegel P. Malnutrition and mortality in Kohistan District, Afghanistan. *JAMA* 2001, 286(21): 2723-8.
8. Spinaci S, De Virgilio G, Bugiani M, Linari D, Bertolaso G, Elo O. Tuberculin survey among Afghan refugee children. Tuberculosis control programme among Afghan refugees in North West Frontier Province (NWFP) Pakistan. *Tubercle* 1989, 70(2): 83-92.
9. van Hest NA, de Vries G, van Gerven PJ, Baars HW. Delay in the diagnosis of tuberculosis.

- Netherlands Tijdschrift Voor Geneeskunde 2003, 147(38):1825-9.
10. Morgan AE, Lappan CM, Fraser SL, Hospenhal DR, Murray CK. Infectious disease teleconsultative support of deployed healthcare providers. *Military Med* 2009, 174(10): 1055-60.
 11. Khan IM, Khan S, Laaser U. Tuberculous meningitis: a disease of fatal outcome in children. *Eur J Pediatr* 2003; 162(4): 281-2.
 12. Kumar R, Dwivedi A, Kumar P, Kohli N. Tuberculous meningitis in BCG vaccinated and unvaccinated children. *J Neurol Neurosurg Psychiatr* 2005, 76(11): 1550-54.
 13. Tuberculosis and children: the missing diagnosis: a growing problem. *Child Health Dialogue* 1996; 12: 2-3.
 14. Kumar P, Kumar R, Srivastava KL, Kumar M. Protective role of BCG vaccination against tuberculous meningitis in Indian children: a reappraisal. *Nat Med J India* 2005, 18(1): 7-11.
 15. Puvacic S, Dizdarevic J, Santic Z, Mulaomerovic M. Protective effect of neonatal BCG vaccines against tuberculous meningitis. *Bosnian J Basic Med Sci* 2004, 4(1): 46-9.
 16. Zaidi AK, Awasthi S, deSilva HJ. Burden of infectious diseases in South Asia. *BMJ* 2004, 328(7443): 811-5.
 17. Raghu MB, Patel YS, Chintu C, Chawla V. Tuberculous manifestations in children. *Med J Zambia* 1980, 14(4): 53-6.
 18. Johnson CA, Hill ID, Bowie MD: Abdominal tuberculosis in children: a survey of cases at the Red Cross War Memorial Children's Hospital, 1976-1985. *South Afr Med J* 1987, 72(1): 20-22.
 19. Reinert P. Infections in malnourished infants and children. *Dev Sante* 1993; 103: 4-6.
 20. Nossar V. The care of children from developing countries in Australia. *Med J Aust* 1992, 156(6): 371-2.
 21. Christensen L. War and health in Angola: review of a patient material. *Tidsskr Nor Laegeforen* 1993, 113(3): 356-9.
 22. Bircan Z, Yavuz Yilmaz A, Katar S, Vitrinel A, Yildirim M. Childhood idiopathic nephrotic syndrome in Turkey. *Pediatr Int* 2002, 44(6): 608-11.
 23. Bhatia M, Kher K, Minniti CP. Acute lymphoblastic leukemia in a child with nephrotic syndrome. *Pediatr Nephrol* 2004, 19(11): 1290-93.
 24. Ahmad K. Measles epidemic sweeps through Afghanistan. *Lancet* 2000, 355(9213): 1439.
 25. Nationwide measles vaccination campaign for children aged 6 months-12 years - Afghanistan, 2002. *MMWR* 2003, 52(16): 363-6.

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