THE YIELD OF LABORATORY INVESTIGATIONS FOR INFECTIVE AGENTS - A PILOT STUDY FINDINGS ON FOREIGN WORKERS

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SUMMARY: A total of 245 foreign workers was screened for various microbial and parasitic infections, as part of the pilot study on the health problems of foreign workers. The sample comprising of Indonesian and Bangladeshi workers, was selected on a non-probability basis from two sources, i.e. University Hospital and a private sector. This investigation revealed substantive number of workers with positive cases to some of the microbial and parasitic infections.

KEYWORDS: Pilot study, infective agents, foreign workers

The continuous influx of foreign workers into the country brings with it, its share of social economic and health problems. A pilot study was undertaken to assess the impact of foreign workers on our health system as well as to determine the prevalence rate of microbial and parasitic pathogens in these workers.

A pilot study which was clinic based and involved face to face interview was carried out in 1997. The information obtained using a structured questionnaire included data pertaining to social, demographic, environmental, medical, and recent illness. Physical examinations were also performed together with the collections of stool, venous blood, and urine specimens for microbiological, parasitological and clinical laboratory investigations.

Of the 245 subjects who participated in the study, 133 were Bangladeshi (all males) while the rest were Indonesian comprising of 84 males and 28 females. Most of the Indonesian workers (84%) were from Jawa Timur and Jambi, Sumatra, while majority of the Bangladeshis (67.7%) were from two neighbouring administrative districts of Dhaka and Chittagong. Majority of the Indonesians (50.0%) were working in service industry, while 53.5% Bangladeshis were in the manufacturing industry. One-fifth of the workers lived in squatter areas, and nearly half of them were working for the service industry.

About 70 % of the workers had at least one infection. The proportion was slightly higher among the Indonesians (72.3%) compared to the Bangladeshis (67.7%). Of the microbiological investigations, 18 (8.5%) was positive to HbSAg, 5 (2.2%) to RPR/ THPHA. and 5 (3.5%) stool positive for Salmonella. There was one positive case for HIV.

Examination for fecal pathogens revealed that 51 (31.9%), *Blastocystis hominis* 34 (21.4%) for hookworm, 23 (14.4%) for *Trichuris*, 8 (5.0%) for *Giardia*, 2 (1.3%) for *Ascaris*. Blood serology for parasitic infections showed that there were 61 (78.2%) positive for *Toxoplasma*, 60 (77.9%) for Filaria, 70 (29.8%) *Entamoeba histolytica* . 22 (9.4%) *Schistosoma*, and 13 *(5.5%) Echinococcos*.

It is of interest to point out that 40.0% had multiple infections. (Figure 1) It seemed that the proportion of multiple infections was higher (67.3%) in Bangladeshi workers compared to the Indonesian (50.9%). Thirteen subjects had 5 or more infections. A brief profile of two of these subjects are shown in the Box below.

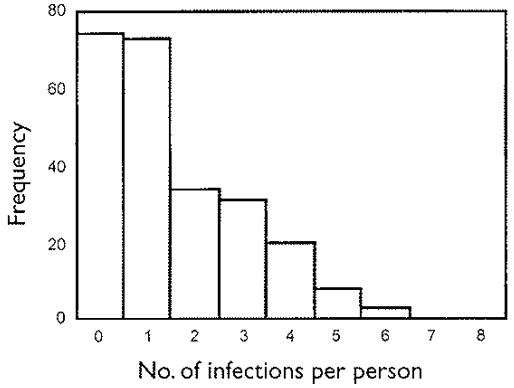

Figure 1. Distribution of number of infections per person

Case 1

GJ is a 47 year old Indonesian Muslim from Jambi province of Sumatra. He is married and stays home with both his wife and 3 children. He is employed as a janitor at the University Hospital Kuala Lumpur. He is staying in a rented house with a piped-water supply and pour latrine. He claimed that he used the same type of basic toilet and water supply facilities in Jambi.

Microbiology & Parasitology findings::

HbSAg for Hepatitis B
Ova for Hookworm, Trichuris
Blastocystis – diarrhoea causing pathogen

Serology positive for:

Amoebiasis, Filariasis, Schistosomiasis
Toxoplasmosis

Case 2

MNI is a 28 year old Bangladeshi Muslim from the administrative division of Dhaka. He is single. He works at a construction site. The "Kongsi" in which he stays has a piped-water supply and pour flush latrines. He used well water and a pour flush at the place where he comes from.

Microbiology & Parasitology findings:

HbSAg for Hepatitis B
Blastocystis – diarrhoea causing pathogen

Serology positive for:

Amoebiasis, Echinocosis, Filariasis,
Schistosomiasis, Toxoplasmosis

Conclusion

It is evident that from the pilot study, the high prevalence of microbial and parasitic pathogens these workers have, warrants attention. It is common knowledge that these workers are generally housed in cramped surroundings or over crowded dwelling and this would facilitate easy transmission of infectious organisms from one worker to another. The findings show that these workers may be prone to take leave from work as a result of symptoms that may be caused by these infections. The economic loss as a result of this and their probable dependence on our health system for recovery suggest that an extensive study be executed to assess the problems at large.

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