Behavior of pneumonia in the pediatric ward of KHMH in Belize. September – December 2012.

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Abstract
Pneumonia is the leading cause of death in children under 5 years in the world. We carried out a descriptive, longitudinal, retrospective study to determine the behavior of pneumonia in the pediatric ward of the Karl Heusner Memorial Hospital (KHMH) in the period of September to December 2012. The study group consisted of all patients admitted to this ward in the aforementioned period with nonsurgical criterion. The 157 patients diagnosed with pneumonia were used as sample. Once the sample was defined the clinical records of all patients were reviewed. The variables used were sex, age, symptoms, type of feeding and morbidity. Absolute numbers and percentages served as summary measurements of the different variables. The results were tabulated, showing that the largest number of cases occurred at ages from 1-4 years with male sex predominance. Fever in over half of the cases and nasal congestion were among the most common symptoms. The type of nursing most used in these children was early artificial and pneumonia had the highest morbidity impact among them.

Keyword
Pneumonia, characteristics, children under 5 years, type of nursing

■ INTRODUCTION

Acute respiratory infections (ARIs) are a complex and heterogeneous group of diseases caused by different germs that affect any part of the respiratory system, lasting less than 4 weeks (1,2,3). These are classified into high and low, complicated and uncomplicated ARIs. Pneumonia is among the uncomplicated ARIs (20). Pneumonia is a general term that refers to an infection of the lungs, which can be caused by various microorganisms, among which viruses, bacteria, fungi and parasites (6,18) are included. As a consequence of the disease, congestion occurs with liquids and inflammatory cells in the damaged tissue in response to aggression, sometimes causing difficulty breathing or also pain. Most cases of pneumonia are caused by viruses, such as adenovirus, rhinovirus, influenza virus (flu), respiratory syncytial virus (RSV) and parainfluenza virus that causes croup (18,20).

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Often pneumonia begins after an infection of the upper respiratory tract (an infection of the nose and throat) and pneumonia symptoms begin 2 or 3 days after a cold or sore throat. Pneumonia is the leading cause of infant mortality in the world and kills a child under age 5 every 15 seconds, accounting for two million each year. This disease causes 20% of the nearly nine million children under 5 years that die annually. It is estimated that each year 150 million children develop the disease and 11 million children are hospitalized because of pneumonia, most of them live in developing countries (15,16). Approximately half of the deaths could be prevented by low-cost measures (vaccination campaigns, effective diagnosis and timely empirical treatment). Pneumonia can be a serious disease if not detected early and may result fatal. For this reason the present work was carried out in order to determine the behavior of pneumonia in the pediatric ward of KHMH.

■ MATERIALS AND METHODS

A retrospective, longitudinal study was carried out to determine the behavior of pneumonia in the pediatric ward of KHMH during the period of September to December 2012. The study group consisted of 362 patients admitted during this period with nonsurgical approach; the 157 patients diagnosed with pneumonia were the sample. Medical records of

each patient were reviewed, considering sex, age, symptoms, type of feeding and morbidity as study variables.
Data obtained were processed by computerized means and tabulated. Analysis and discussion of the results was made that allowed achievement of the objectives and issuing relevant conclusions.

■ RESULTS AND DISCUSSION

In Table 1 we see that the largest number of cases occurred in the 1-4 years age group with 43.31%, followed by children under 1 year for a 33.75%, which are the most vulnerable age groups. These results are consistent with those reported in articles and literature reviewed, which proposes that pneumonia is the leading cause of death in children under 5 years (3-4).

Table 1. Patients by age, KHMH, September – December 2012

AGE GROUPS	N	%
Under 1 year	53	33.75
1-4 years	68	43.31
5-12 years	36	22.92
Total	157	100

Source: CR

As Table 2 shows there was a predominance of males with 56.68% (4-9).

Table 2. Patients by sex, KHMH, September – December 2012

SEX	N	%
Female	68	43.31
Male	89	56.68
Total	157	100

Source: CR.

When referring to the first symptoms (Table 3), fever, an early sign for any sepsis, was present 59.23% of cases; followed by nasal congestion with 17.83% and cough with phlegm in 17.19%. Breathing difficulties were found in 5.73%. Other symptoms, such as lack of appetite and vomiting were found in isolated cases.

Table 3. Signs and symptoms at admission. KHMH, September – December 2012

SYMPTOMS	N	%
Fever	93	59.23
Cough with phlegm	27	17.19
Breathing difficulty	9	5.73
Nasal congestion	28	17.83
Total	157	100

Source: CR

Breast milk is the ideal natural food during the first months of life; it is the most appropriate of all milks available as it is exclusively tailored for the babies' needs. The benefits of breastfeeding for children are well demonstrated. It ensures adequate nutritional intake during the first year of life, breastfed babies have a lower death risk when they are ill and of acquiring infections, especially of respiratory and enteric type. According to Table 4, a history of early artificial feeding was present in 85.98% of the cases studied, and only 14.01% showed exclusive breastfeeding. Proper nutrition is key to improving a child's natural defenses, starting with exclusive breast feeding for the first six months of life, in addition to effectively preventing pneumonia, reduces its duration (3,4,20).

Table 4. Feeding history, KHMH, September – December 2012

TYPE OF FEEDING	N	%
Exclusive breastfeeding	22	14.01
Artificial	135	85.98
Total	157	100

Source: CR

Morbidity behavior, shown in Table 5, demonstrates the high incidence of pneumonia accounting for 43.3% of all pediatric cases.

Table 5. Morbidity, KHMH, September – December 2012

MORBIDITY	N	%
Pneumonia	157	43.3
Other respiratory dis.	37	10.22
Digestive disease	50	13.81
Kidney disease	7	1.93
Blood and lymphatic diseases	10	2.76
Cardiovascular disease	4	1.10
Infections	10	2.76
Other	87	24.03
Total	362	100

Source: CR

■ CONCLUSIONS

1. Most of the patients (43.31%) belonged to the 1-4 years age group, and males predominated with 56.68%.
2. The most common symptoms were fever and nasal congestion with 59.23% and 17.83% of the cases, respectively.
3. The type of feeding mostly used was the early artificial in 69.42% of the patients.
4. Pneumonia showed the highest impact on morbidity (43.3%).

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