

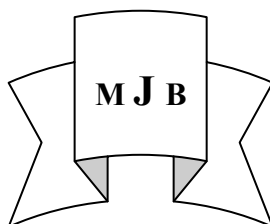
Review of Wheezing in Children in Maternity and Children Teaching Hospital in Al- Diwaniyah- Iraq

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Abstract

This is a review including the wheezing diseases in children, who have attended the Outpatient Department and Emergency Department in the Maternity and Children Teaching hospital in Al-Diwaniyah, from 1/1/2006 to 31/12/2006.

Our study shows that the total number of patients attending the Outpatient Department are more than the number of patients in the Emergency Department and this is possibly due to the fact that a large number of them are mild cases and not required admission to the emergency department.

Our study shows an increasing percentage of wheezing in children in winter seasons particularly January, February, due to increase incidence of acute respiratory diseases in these months.

There are two peaks of number of patients who are admitted to the Emergency Department for different age groups, first peak on January, and the second peak on October and this is due to increase incidence of acute respiratory disease.

مراجعته عامه حول الأزيز عند الأطفال في مستشفى النسائية و الاطفال التعليمي-الديوانية-العراق

الخلاصة:

هذه مراجعته عامه حول امراض الازيز عند الاطفال المراجعين الى العياده الاستشاريه والداخليين الى ردهة الطوارئ في مستشفى النسائية والاطفال التعليمي في مدينة الديوانية للفترة من ٢٠٠٦/١/١ الى ٢٠٠٦/١٢/٣١.

ظهر من الدراسه ان العدد الكلي لمراجعي العياده الاستشاريه يفوق بكثير العدد الكلي للداخليين الى ردهة الطوارئ لان الكثير منهم حالتهم بسيطه لاتستوجب الدخول الى الطوارئ.

كما ظهر من الدراسه زياده نسبة الازيز عند الاطفال في اشهر الشتاء وخاصة كانون الثاني وشباط بسبب زياده وقوع الاصابه بالامراض التنفسيه الحاده في هذه الاشهر. هناك قمتان لعدد المرضى الداخليين الى ردهة الطوارئ ولمختلف الفئات العمرية ، القمه الاولى في شهر كانون الثاني والقمه الثانيه في شهر تشرين الاول بسبب زياده الاصابه بالامراض التنفسيه الحاده.

Introduction.

A wheeze is a continuous musical sound heard during examination of the chest that lasts longer than 250 msec [1].

Wheezing is a common presenting sign of respiratory diseases in children.

Epidemiological studies conducted worldwide have shown that 10 to 15 percent of infants wheeze during the first year of life, and as many as 25 percent of children younger than 5 years of age come to their clinicians with wheezing respiratory illnesses [2].

Most children with recurrent wheezing are very likely to have asthma, regardless of the age of onset, evidence of atopic diseases, precipitating causes, or frequency of wheezing [3]. However, other diseases can be present with wheezing in childhood, and patient with asthma may not wheeze. Therefore, the initial evaluation of a wheezing child should be directed toward the exclusion of other diagnosis, followed by a therapeutic trial of bronchodilators if asthma is suspected [4].

Acute wheezing in children is the most common sign of bronchial asthma and other respiratory disorders, where asthma is a leading cause of chronic illnesses in childhood. It is responsible for a significant proportion of school days loss and frequent admissions in children's hospital, resulting in 5-7/ day lost in school \year\child [5].

Chest infection during infancy, bronchitis caused by respiratory syncytial virus (RSV) have been shown to have highly significant association with asthma and recurrent wheezing [6-8].

The prevalence of asthma is increasing, despite better understanding of its pathogenesis and improved treatment [9]. Recurrent wheezing is the leading source of hospital admission of children in the United state [10]. A critical Ozone concentration seem to exist in atmosphere above or below which children are likely to have wheezy episodes [11].

Before puberty, approximately twice as many boys as girls are affected; the sex incidence is equal thereafter[5].

Patients and Methods

We conducted a cross-sectional study of children with wheezy chest who attended the Outpatient Department or admitted to Emergency department in maternity and Children Teaching hospital in Diwaniyah, from the period of 1/1/2006 – 31/12/2006. We classified the patients according to sex, age groups: under one years, 1-4 year, 5- 14 year. We have excluded questions about birth process, birth weight, feeding pattern, duration of breast feeding, family history of asthma, level of education of parents, and cigarette- smoke exposure.

Results

The total number of patients with wheezing attacks who attended Outpatient Department or Emergency Department during 12 months period for all age groups were 7789 patients. 5087 patients (65.3%) attended outpatient department, 2587 males and 2501 females. 2702 patients (34.6%) attended Emergency Department, 1327 males and 1375 females. We classified the wheezy patients who consulted the Outpatient department in 2006 in the maternity and children teaching hospital according to the age groups; Under one year, 1- 4 years, 5 – 14 years.

Table 1 Distribution of cases by age, sex and time in outpatient department as follow:

Under one year of age			1 - 4 year		5- 14 year		Total number	
Month	Male	Female	Male	Female	Male	Female	Male	Female
January	99	83	82	91	90	50	271	259
February	89	74	85	70	66	57	240	201
March	68	74	70	66	76	64	214	204
April	75	78	68	70	69	71	212	219
May	88	73	84	66	75	74	247	213
June	92	108	31	44	47	53	170	205
July	30	33	23	25	14	13	67	71
August	80	74	78	72	75	70	233	216
September	66	60	65	68	61	59	192	187
October	90	87	81	88	82	80	253	255
November	92	89	84	88	85	83	261	260
December	79	73	72	75	75	63	226	211
Total	948	906	823	823	815	772	2586	2501

Affected male children **under 1 year of age**, a large number was in the January = 99 (10.4%) , June = 92 (9.7%) , November = 92 (9.7%) respectively.

While affected female patients, a large number was in June = 108 (11.9%) , November = 89 (9.8%) , January = 83 (9.1%) respectively .

A small number of wheezy male patients in July = 30 (3.1%), September = 66 (6.9%)

and the female also in July = 33 (3.6%) , and September = 60 (6.6%) (The same months as male).

Regarding the age 1 – 4 years, a high percentage of the disease in male patients was in February = 85 (10.3%) and both November, May = 84 (10.2%).

In female patients, a high percentage of the diseases was in January = 91 (11%) , and both October , November = 88(10.6%) .

Low percentage of diseases for male patients was in July =23 (2.7%) and June 31 (3.7%) , where as female patients was in July = 25 (3%) and June = 44 (5.3%).

Regarding the age 5 – 14 year;

A large number of male patients was in January = 90 (11%) , November = 85 (10.4%) , October= 82 (10%) , about female patients was in January = 85(11%) November=83 (10.7%) , October = 80 (10.3%) – (the same months as males)

A small number of male patients was in July = 14 (1.7 %), June 47 (5.7%),

And female patients was in July = 13 (1.6%), June = 53 (6.8%) .

A highest total number of male patients for all age groups was in January = 271 (10.4%) , November = 261 (10%) , October = 253 (9.7 %) , and female patients was in November = 260 (10.3%) , January = 259 (10.3 %) , October = 255(10%)----- table (1).

A lowest total number of male patients for all age groups was in July = 67 (2.5%)

, June = 160 (6.1%), and female patients was in July = 71 (2.8%), June =187(7.4%) too ----- table (1).

However, the age under 1 year is the most affected group during whole months of year, where in male patients was = 948 (36.6%), and female patients = 906 (18%) , where as the age group 5 – 14 year is less affected in male and was = 815 (31.5%) and female was = 772 (15.4%), table (1).

The number of patients admitted to the Emergency Department was less than those attended the Outpatient Department because most of the cases were mild, easily treated and no need for admission.

In Emergency department the total number of male patients for all age groups during whole year was 1327 compared with that patients who visit the Outpatient Department was = 2586 , and the total number of female. patients was admitted to the emergency department was = 1375 comparing with that visited the outpatient department = which was = 2501 . we found that there were a modest increase in number of female patients. who admitted to the emergency department = 1375 than that found in male patients = 1327 , this perhaps due to severity of cases seen in female patients than male patients table (2)

Table 2 Distribution of cases by age, sex, and time in emergency department

Under one year of age			1 - 4 yr.		5 _ 14 yr.		Total number	
Month	male	female	Male	female	Male	female	Male	Female
January	51	47	63	69	48	55	162	171
February	23	18	21	29	26	34	70	81
March	19	27	21	17	25	34	65	78
April	42	38	46	41	50	42	138	121
May	36	29	25	32	24	18	85	79
June	35	29	31	25	37	19	103	73
July	43	37	26	35	32	41	101	113
August	36	28	45	53	32	41	113	122
September	25	29	33	42	19	21	77	92
October	71	68	64	67	52	63	187	198
November	22	31	35	43	19	26	76	100
December	41	53	62	56	47	28	150	147
Total	444	434	472	509	411	432	1327	1375

Table (2) the distribution of cases by age, sex, and time in emergency department. The number of patients admitted to the Emergency Department distributed

according the age groups;

Under 1 year; the number of male patients was in October = 71 (15.9%) and 22 (4.9%) in November. The female

patients was in January 69 (15.8%), 18 (4.1%) in March.

1- 4 year: in male patients was in October = 64 (13.5%), 21 (4.4%) in both February and March. In female patients was in January 69 (13.5%) , 17 (3.3%) in March

5 – 14 year: in male patients was in October 52 (12.6%), 19 (4.6%) both in September and November. In female patients was in October 63(14.5%), 19 (4.3%) in June, 18 (4.1%) in May

The highest total number of female patients who admitted to the emergency department for all age groups was in October = 196 (14.4%) and the lowest number was in June = 73 (5.3%). while in male patients a highest number in October = 187 (14%) and lowest number in March = 65 (4.8%) table (2).

The age group **1 – 4 year** has a greater number of admission for all months , in male =472 (35.5 %) , in female = 509 (37%), and the age group **5 – 14 year** has a lower number of admission for all months , in male =411 (30.9 %) , in female = 432 (31 %) table (2).

Discussion

This review showed that the total number of patients with wheezy chest who have visited the Outpatient Department are much more than those admitted to the emergency department , this mean that most cases were mild in severity and no need to be admitted to the emergency department and possibly can be treated properly in the outpatient department only .

In addition, our study showed that a significant number of asthmatic female patients more than male patients admitted to the emergency department and this is due to the severity of illness in female patients.

There were differences between the numbers of patients in Outpatient Department and varying months of year, where as the winter months like January, February had a higher rate of patients

consulted the outpatient department where as July month had less number particularly the age under one year and 1 – 4 year, this is because of increase in the prevalence of respiratory disorder induce wheezing in winter months than in other months or seasons for example July. There were no wide differences among number of male or female patients consulted the outpatient department with different age groups.

There were two peaks of number of patients who admitted to the emergency department , for the age group under **one year and 1 – 4 year** , first peak in January and second peak in October and this is due to rise in respiratory diseases – induced wheezing in these two months. Other study noted in England Wales , asthma admission were lowest in winter and peaked in autumn , where as in Mexico they were more frequent in the rainy season [12].

In Korea , relative humidity was found to be a more important contributing factor than temperature to exercise induced bronchospasm in pat. with perennial asthma [13].

Conclusions

Wheezy chest is a major public health problem among children in Al-Diwaniyah city. Occurrence of severe asthma symptoms was similar or higher but not lower than other countries. Significant sex differences were reflected by male predominance in wheezing who attended Outpatient Department and female predominance in wheezing who attended Emergency Department , that mean more sever wheezing or illness in female patients required admission and urgent treatment .

Both asthma and wheezing attacks decreased steadily with increasing age.

Some families prefer anti- allergic and cough suppressor or mucolytic agent for treatment of wheezing with out doctor consultation this lead to increase the

severity of illness and delay in seeking medical advice.

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