

The Medicine Pattern of The Acute Gastroenteritis (Diarrhea) Cases In Pediatric Ward of Dr. Soetomo Teaching Hospital-Surabaya (Indonesia)

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Background

- The problem of the public health especially in developing countries
- High morbidity
- Economic problem
- The medicine pattern of the acute gastroenteritis cases in pediatric ward of Dr. Soetomo teaching hospital-Surabaya (Indonesia)



Objectives

To study the medicine pattern of the acute gastroenteritis cases in pediatric ward of Dr. Soetomo teaching hospital Surabaya (Indonesia)

To analyze the following descriptive data :

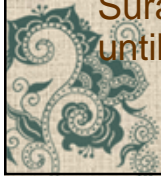
- The highest number of the group of age of patient who had suffered from acute gastroenteritis
- The average of the long of stay of the acute gastroenteritis patient
- The mostly type of medicine that used on the acute gastroenteritis patient
- The average of treatment course
- The average dosage unit per day that has been used
- The number of patient who received and did not receive antimicrobial therapy

Variables of study

- Independent variables
Age, sex, dehydration level
- Dependent variables
The long of stay, treatment course, dosage unit per day

Population, sample, location and source

- Population
Acute gastroenteritis patients in pediatric ward of Dr. Soetomo Teaching Hospital-Surabaya from Sept. 2002 to August 2003
- Source
Medical record of the acute gastroenteritis patients at Dr. Soetomo teaching hospital Surabaya that had hospitalised within Sept 2002 until August 2003



Population, sample, location and source

- Location
Dr. Soetomo Teaching Hospital
- Sample
Simple random sampling: 10 patient/month (Data of September 2002 – August 2003)



Inclusion/exclusion criteria

Inclusion criteria :

- Acute gastroenteritis patients with or without dehydration
- Without severe concomitant disease

Exclusion criteria :

- Going out from hospital without permission
- Died



Method of Study

- Descriptive
- Retrospective
- Non experimental study



Result

Total acute gastroenteritis cases at Dr. Soetomo teaching hospital Surabaya from September 2002 to August 2003 that were appropriated to the inclusive criteria

No	Month	Total patient
1	September 2002	49
2	October 2002	39
3	November 2002	44
4	December 2002	34
5	January 2003	57
6	February 2003	64
7	March 2003	52
8	April 2003	67
9	May 2003	82
10	June 2003	60
11	July 2003	55
12	August 2003	51
Total :		654

Simple random sampling to 120 acute gastroenteritis patients

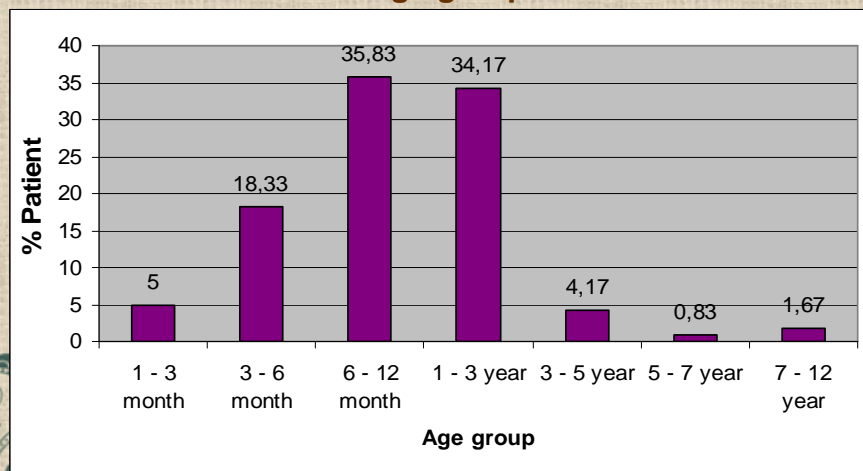
Classification of the age group vs dehydration level vs total patient and percentage of the acute gastroenteritis patients from Sept.2002 to August 2003

No	The age group	Degree of Dehydration								ΣΣ	Σ%
		Without dehydration		Mild dehydration		Moderate dehydration		Severe dehydration			
		Σ	%	Σ	%	Σ	%	Σ	%		
1	1 - 3 month	1	0,83	1	0,83	4	3,33	0	0	6	5
2	3 - 6 month	0	0	5	4,16	17	14,17	0	0	22	18,33
3	6 - 12 month	0	0	11	9,17	30	25	2	1,67	43	35,83
4	1 - 3 year	0	0	16	13,33	25	20,83	0	0	41	34,17
5	3 - 5 year	0	0	1	0,83	4	3,33	0	0	5	4,17
6	5 - 7 year	0	0	0	0	0	0	1	0,83	1	0,83
7	7 - 12 year	0	0	1	0,83	0	0	1	0,83	2	1,67
Total		1	0,83	35	29,15	80	66,66	4	3,33	120	100

Σ=patient
%=percentage of patient
ΣΣ= total patient
%%=total percentage of patient

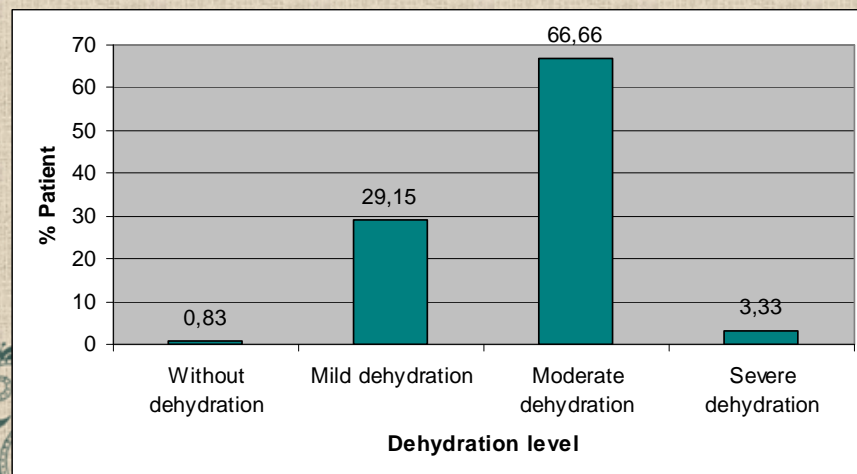
Result

Percentage of the acute gastroenteritis patients vs the age group



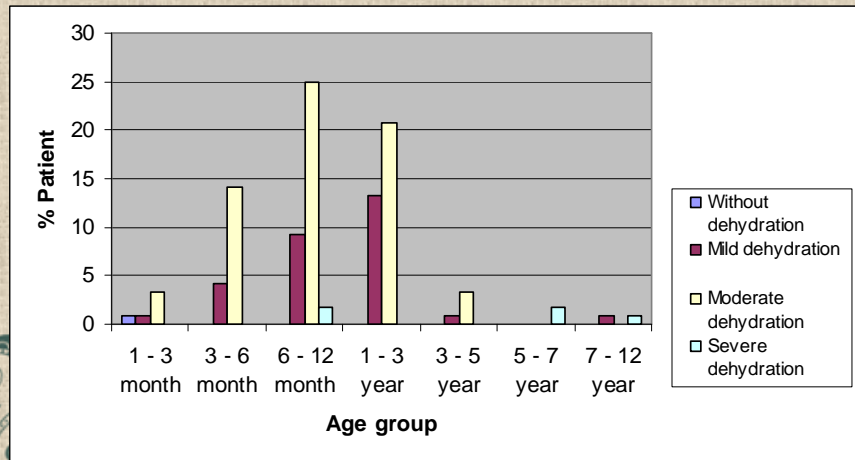
Result

Percentage of the acute gastroenteritis patients vs degree of dehydration



Result

Percentage of acute gastroenteritis patient vs the age group and dehydration level



Result

Classification of the age group and dehydration level vs percentage of patient, the average of the long of stay, the average of the medicine of the acute gastroenteritis patients from September 2002 to August 2003

No	The age group	Degree of Dehydration and The Long of Stay								Σ%	ΣX	The Average Σ Type of Medicine
		Without Dehydration		Mild dehydration		Moderate Dehydration		Severe Dehydration				
		%	X	%	X	%	X	%	X			
1	1 - 3 month	0,83	4	0,83	4	3,33	3	0	0	5	3,33	3,83
2	3 - 6 month	0	0	4,17	3,8	14,17	3,47	0	0	18,33	3,55	4,09
3	6 - 12 month	0	0	9,17	3,55	25	3,33	1,67	3,5	35,83	3,4	3,65
4	1 - 3 year	0	0	13,33	3,13	20,83	3,32	0	0	34,17	3,24	3,85
5	3 - 5 year	0	0	0,83	3	3,33	2,75	0	0	4,17	2,8	3,2
6	5 - 7 year	0	0	0	0	0	0	0,83	7	0,83	7	5
7	7 - 12 year	0	0	0,83	3	0	0	0,83	4	1,67	3,5	4
Total		0,83	4	29,16	3,37	66,66	3,31	3,33	4,5	100	3,38	3,81

%=Percentage of patient

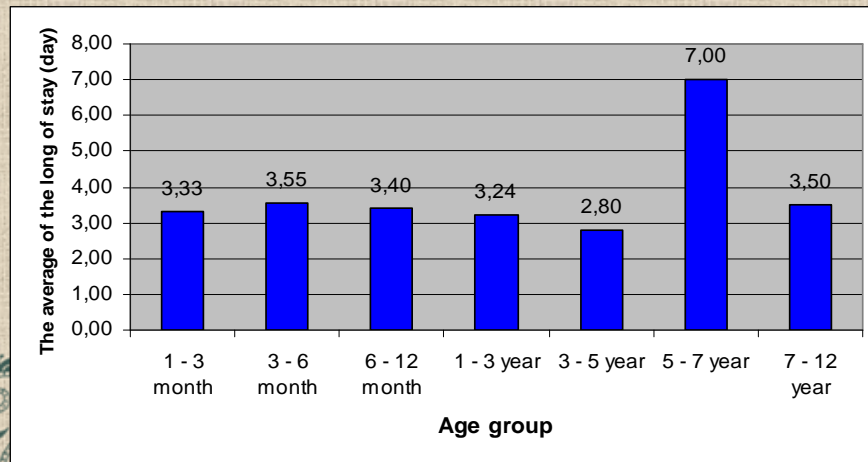
Σ%=Total percentage of patient

X=The average of the long of stay

ΣX=Total the average of the long of stay (day)

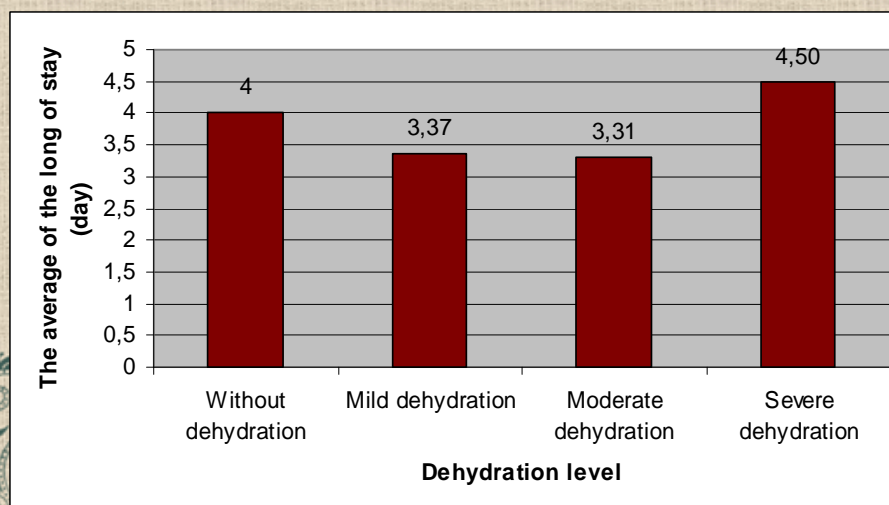
Result

The average of the long of stay of the acute gastroenteritis patient vs the age group



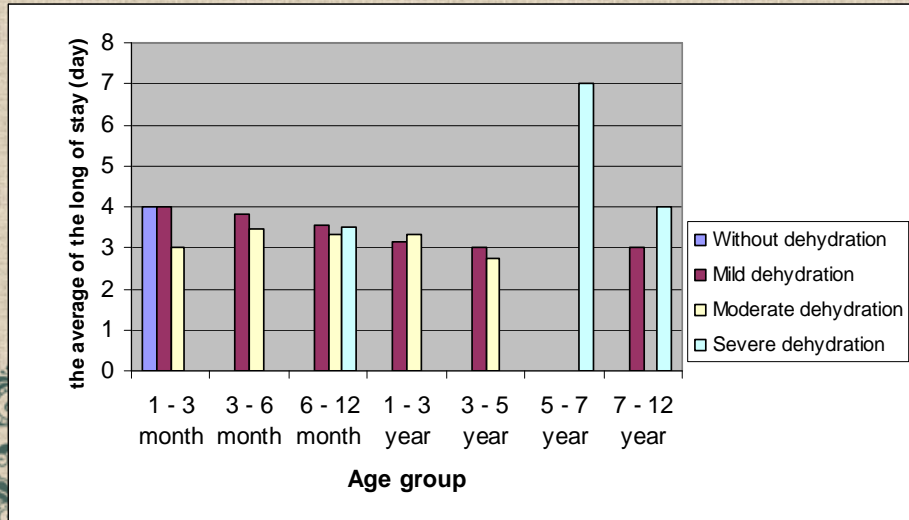
Result

The average of the long of stay of the acute gastroenteritis patient vs dehydration level



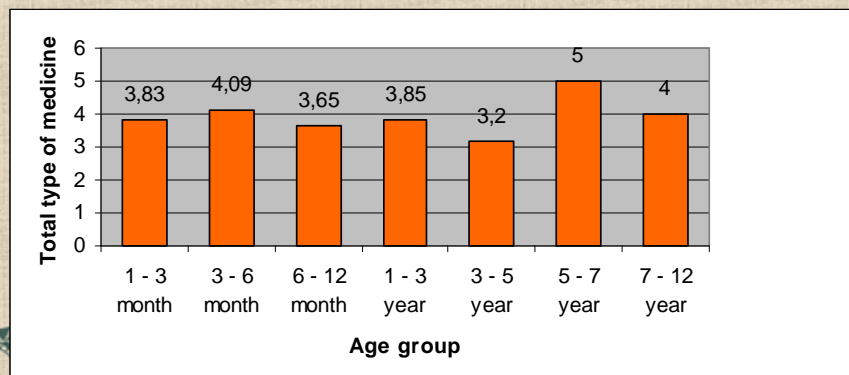
Result

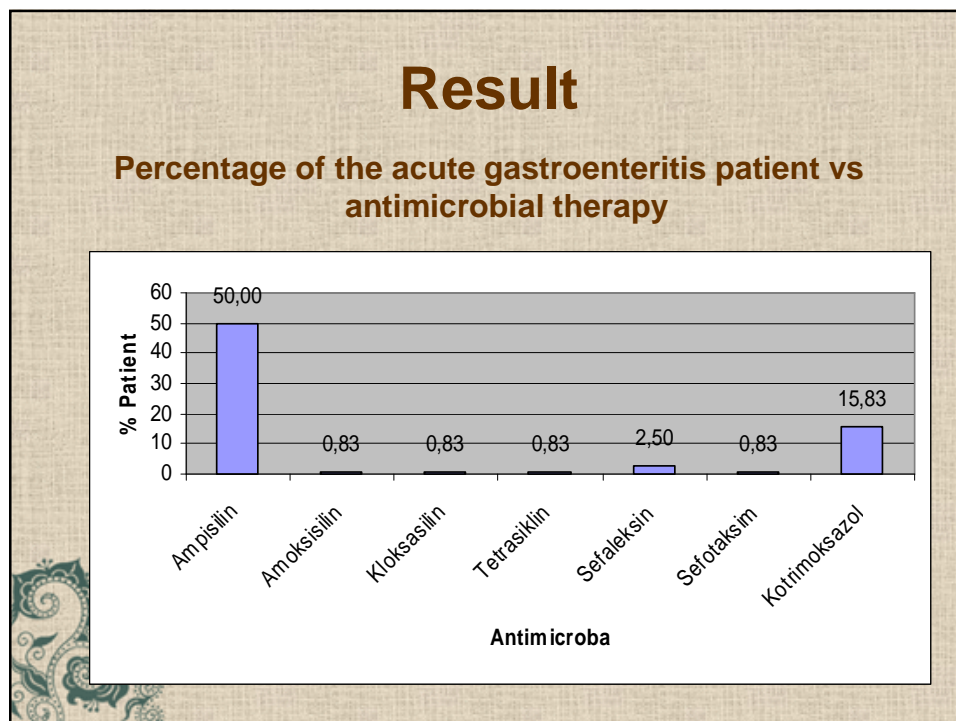
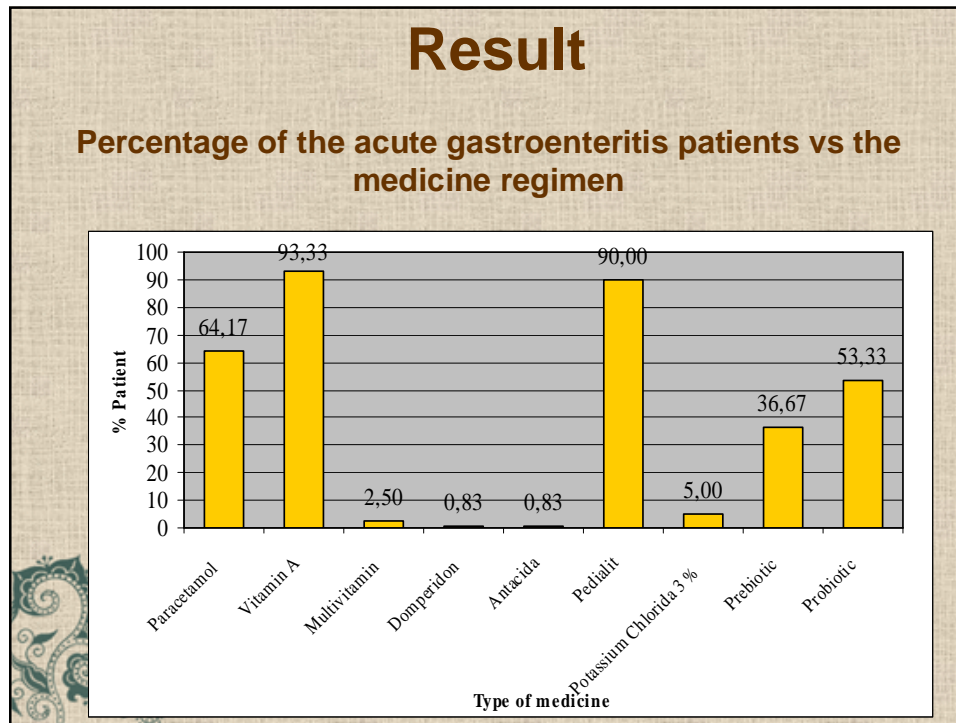
The average of the long of stay of the acute gastroenteritis patients vs the age group and dehydration level



Result

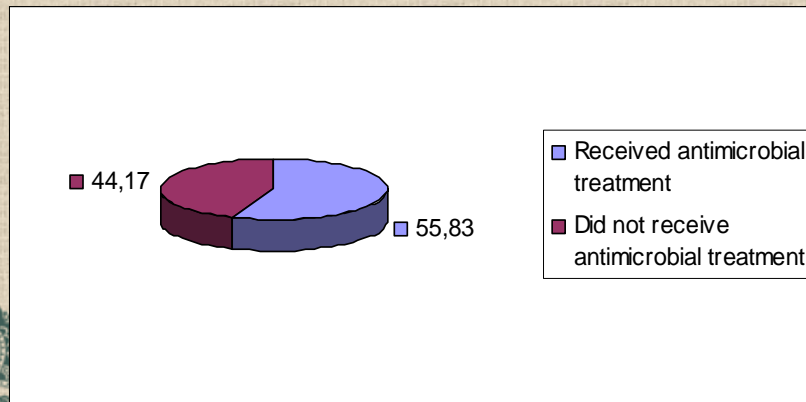
The average type of medicine that was given to the acute gastroenteritis patients vs the age group





Result

Percentage of gastroenteritis patient who received and did not receive antimicrobial treatment



Result

Parenteral rehydration of the acute gastroenteritis patient at the certain day based on age group vs percentage of patient who received parenteral rehydration at the certain day from Sept. 2002 to August 2003

Parenteral rehydration therapy (*)	% Patient based on age group						
	1-3 month	3-6 month	6-12 month	1-3 year	3-5 year	5-7 year	7-12 year
Day - 1	100	100	100	100	100	100	100
Day - 2	66,67	72,73	74,42	70,73	60	100	100
Day - 3	33,33	22,73	23,26	14,63	20	100	-
Day - 4	-	13,64	11,63	2,44	-	-	-
Day - 5	-	4,55	4,65	-	-	-	-
Day - 6	-	-	2,33	-	-	-	-

(*)Parenteral rehydration therapy :

- The age group of 1-3 month : D₁₀ 0,18 S infusion
- The age group of 3 month-12 year : HSD infusion except 1 patient in the age group of 7-12 tahun RL infusion

Conclusion

1. The highest number of patient who had suffered from acute gastroenteritis was the age group of 6-12 month
2. The average of the long of stay of the acute gastroenteritis patient was 3.38 day
3. The non-antimicrobial medicine that was mostly given to the acute gastroenteritis patient was vitamin A. Vitamin A was given to 93.33% patient, with the average of dosage unit per day was 1.00 within 2.68 day. From the group of the electrolyte, pedialyte was given to 90.00% patient, the average duration of the used of pedialyte was 2.88 day, pedialyte was given when the patient had vomited and diarrhea. The analgesic-antipyretic paracetamol was given to 64.17% patient, with the average usage of paracetamol per day was 2.35 dosage unit within 2.41 day. Probiotic was given to 53.33% patient, the average of probiotic per day was 1.63 dosage unit within 2.63 day, then followed by prebiotic that was given to the 36.67% patient with the average of prebiotic per day was 1.59 dosage unit within 2.20 day

Conclusion

4. Total acute gastroenteritis patient who received antimicrobial treatment was 55.83% and 44.17% acute gastroenteritis patient did not receive antimicrobial treatment. The antimicrobial that was mostly given to the acute gastroenteritis patient was ampicillin, the penicillin group. Ampicillin was given to 50.00% patient with the average of ampicillin per day was 2.20 dosage unit within 2.30 day. Then, followed by the antimicrobial of cotrimoxazole that was given to the 15.83% patient. The average of cotrimoxazole per day was 1.48 dosage unit within 1.78 day.

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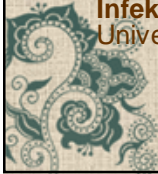
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