

Predictors of Hospital Admission for Pediatric Cyclic Vomiting SyndromeAbdulkader ZM, Bali N, Vaz K et al; *The Journal of Pediatrics*, Nov 2020DOI: <https://doi.org/10.1016/j.jpeds.2020.11.055>

Background & Aims: Cyclic vomiting syndrome (CVS) is a functional gastrointestinal disorder (FGID) with episodes of intense nausea and vomiting lasting hours to days. Authors aimed to study the factors predicting need for hospital admission in children with CVS on presentation to an emergency set-up.

Method: Records fetched for 219 children with CVS, n=139 included. 53% female, mean age 11.8 years (range 5-22 y). **Exclusions:** Non fulfillment of ROME IV criteria and ED (emergency department) visits prior to CVS diagnosis. Disposition from ED: **Hospitalization OR Discharge** as outcome variable

ACADEMIC P.E.A.R.L.S**P**ediatric **E**vidence **A**nd **R**esearch **L**earning **S**nippet**Predictors of hospitalization for children with cyclic vomiting syndrome**Abdulkader ZM, Bali N, Vaz K et al; *The Journal of Pediatrics*, Nov 2020**Independent variables assessed :**

1. Gender, age
2. Prior ED visits
3. Use of prophylactic medications
4. Use of rescue drug prior to ED visit
5. Time from symptom onset to ED visit
6. Interval from ED arrival to intravenous antiemetic/Normal Saline bolus(NSB)
7. No. of antiemetic doses/NSBs at ED

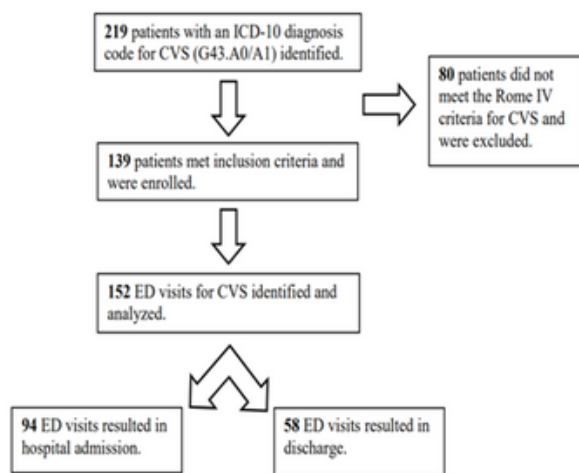
Predictors of Hospitalization from the ED

VARIABLE	B	SE	OR (CI 95%)	p-value
Sex, male	-1.39	0.68	4.02 (1.06-15.2)	0.04
Decreasing age	-1.38	0.062	1.15 (1.02-1.3)	0.027
Time to presentation				
12-24 Hours	0.89	0.56	2.44 (0.75-7.80)	0.135
>24 Hours	2.47	0.62	11.8 (3.53-39.5)	<0.0001
Daily prophylaxis	0.79	0.54	0.45 (0.16-1.29)	0.141
History of prior ED visit	1.09	0.75	3.0 (0.69-13.04)	0.143
Time to treatment (antiemetic)	0.53	0.243	1.70 (1.06-2.73)	0.029
Volume of NSB				
Up To 10 Mg/Kg	-0.95	1.03	0.19 (0.03-1.42)	0.106
Up To 20 Mg/Kg	-0.71	1.68	0.49 (0.02-13.3)	0.67
>20 Mg/Kg	0.273	0.53	0.76 (0.27-2.15)	0.61

- 60% (94/152) of ED visits for CVS led to hospitalization.
- No difference in hospitalization rates among low/medium/high ED utilizers.
- Prior ED visits for CVS, use of prophylactic medications, total volume of normal saline boluses did not predict hospitalization from ED.

Predictors for hospitalization from ED for CVS are:

- Male gender
- Younger age
- Delayed presentation to ED after initial symptoms
- Wait time in ED for getting antiemetic dose



ED Utilizers	ED visits	No. (%) (N=139)
None	0	107 (77)
Low	≤ 2	19 (13.8)
Medium	≤ 5	4 (2.9)
High	> 5	9 (6.5)

Conclusion: A delayed presentation to ED following onset of symptoms was the strongest independent predictor of hospital admission.

EXPERT COMMENT

“Early recognition and intervention within few hours of onset of symptoms, is mandated in CVS especially in younger children prone for severe dehydration. High Dextrose infusions circumvent the emetogenic effects of fasting induced surge of ketones released from liver.”

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With warm regards,

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DHALIWAL****DR. PIYUSH GUPTA**
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GEN. 2021 - 22Editor – Academic Pearls
pedpearls@gmail.com**Reference**

Zeyad M. Abdulkader, Neetu Bali, Karla Vaz, Desalegn Yacob, Carlo Di Lorenzo, Peter L. Lu, Predictors of Hospital Admission for Pediatric Cyclic Vomiting Syndrome, *The Journal of Pediatrics*, Volume 232, 2021, Pages 154-158, ISSN 0022-3476, <https://doi.org/10.1016/j.jpeds.2020.11.055>