SAEMS
NAUSEA-VOMITING-DIARRHEA STANDING ORDER
Self-Learning Module

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January 2016
PURPOSE

This SAEMS Standing Order Training Module has been developed to serve as a template for EMS provider training. The intent is to provide consistent and concise information to all providers practicing within the SAEMS Region. The content of the Training Module has been reviewed by the Protocol Development and Review Sub-Committee, and includes the specific standing order, resource and reference material, and instructions for completing the Training Module to obtain continuing education credit. Two hours of SAEMS continuing education may be issued following successful completion of the module.

OBJECTIVES

Upon completion of this learning module the participant will be able to:

1. Identify causes of nausea and vomiting
2. Identify possible causes of vomiting/diarrhea in the pediatric population
3. Identify at least four serious conditions causing nausea, vomiting and diarrhea
4. Identify pathophysiology of nausea and vomiting
5. Describe how to assess a patient with complaints of nausea, vomiting and/or diarrhea
6. Describe the initial management of the high risk causes of vomiting

INSTRUCTIONS

1. Read the self-learning module and view the PowerPoint presentation.
2. Complete the attached post test and return to your supervisor or your base hospital manager/coordinator for continuing education credit

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INTRODUCTION

The EMS system is evolving from entities that only existed to initiate emergency treatment of obviously life-threatening traumatic and non-traumatic conditions to those which can perform triage, identify risk factors for signs and symptoms of potentially serious medical conditions, and begin the first stages of emergency department treatment. As the EMS system matures, so does the realization that the first contact gives the opportunity for EMTC’s to positively affect the outcome of patient care.

Treatment for symptoms like nausea, vomiting and diarrhea would not have been considered the role of EMS even 15 years ago. The paramedic frequently began and ended with an apology for not being able to offer any treatment for the patient retching in the back of the ambulance. Today it is not only possible, but quite simple to provide prompt symptomatic relief to patients who have nausea and/or vomiting prior to their arrival in the ED.

It is imperative that all EMTC’s recognize that not all vomiting is viral-related; there are often potentially serious medical conditions that generate these symptoms, especially in the peds and geriatric population. It is the responsibility of the EMTC who treating these patients to evaluate the patients signs and symptoms along with the medical history.

Nausea, vomiting and diarrhea are not diseases, but rather are symptoms of many different conditions, such as infection, food poisoning, motion sickness, overeating, blocked intestine, illness, brain injuries, appendicitis and migraines. Nausea, vomiting and Myocardial infarction, kidney or liver disorders, central nervous system disorders, brain tumors and some forms of cancer.

Diarrhea is the condition of having at least three loose or liquid bowel movements each day. It often lasts for a few days and can result in dehydration due to fluid loss. Signs of dehydration often begin with loss of the normal stretchiness of the skin and changes in personality. This can progress to decreased urination, loss of skin color, a fast heart rate, and a decrease in responsiveness as it becomes more severe.

The most common cause is an infection of the intestines due to a virus, bacteria, or parasite; a condition known as gastroenteritis. These infections are often acquired from food or water that has been contaminated by stool, or directly from another person who is infected. It may be divided into three types: short duration watery diarrhea, short duration bloody diarrhea, and if it lasts for more than two weeks, persistent diarrhea.

PEARLS
- Recommended Exam: Mental Status, Skin, HEENT, Neck, Hear, Lungs, Abdomen, Back, Extremities, Neuro
- Document the mental status and vital signs prior to administration of medications
- Isolated vomiting in pediatrics may be caused by pyloric stenosis, bowel obstruction, and CNS process (bleeding, tumors, or increased CSF pressure.)
NAUSEA/VOMITING/DIARRHEA STANDING ORDER

Initiate Immediate Supportive Care:
- Oxygen to maintain O2 sat ≥ 94%
- Complete primary and secondary survey as indicated
- Vital signs including FSBG and temperature as indicated

Use standing order on patients with complaint of nausea, vomiting and/or diarrhea

Patient meeting Trauma Triage Decision Scheme
Patients meeting Pediatric Triage Criteria

BLS Care:
- Initiate IV NS/LR (if permitted)
- If isolated nausea/vomiting/diarrhea, bolus 20ml/kg and reassess pulmonary status frequently
- Transport in position of comfort with supportive measures as indicated

ALS Care:
- Follow BLS orders
- If patient complains of nausea and/or vomiting, administer Ondansetron
  - Adult (>30 kg)
    - Ondansetron 4 mg IV, if no response, may repeat once after 15 minutes
  - Pediatric (<30kg)
    - Ondansetron 0.15 mg/kg IV (max dose 4mg), do NOT repeat dose
- If unable to obtain IV, may give IM at same dose

Special Note:
- Ondansetron IM in general is ineffective for motion sickness
- Ondansetron IM dosing onset time 15 minutes with peak level 20-40 minutes
- Consider additional Provider PPE for these patients

10/2008; revised 10/2015; 01/16
Drug Profile


References

POST TEST

NAME: ___________________________________________ DATE: ____________

1. True or False: Severe nausea, vomiting and diarrhea can cause decline in patient health.

2. True or False: A 17-year old boy has ingested a large amount of alcohol and barbiturates, and has vomited once per his friend. He tells you he is feeling like he is going to “throw up”. You may implement the nausea/vomiting/diarrhea standing order.

3. True or False: Stimulation of any receptor can result in activation of the zone causing N/V.

4. Internal causes of nausea and vomiting can include:
   a. Head Injury
   b. Severe Pain
   c. Viral Infections
   d. a, b & c

5. Which of the following is not an external causes of nausea and vomiting can include:
   a. Motion sickness
   b. Medications
   c. Pregnancy
   d. Poisoning

6. True or False: Pathophysiology of emesis: Peripheral receptors would be affected by obstructions, gastroparesis, drugs and radiation.

7. Emotions, sights and smells stimulate the vomiting center through the
   a. Vestibular Apparatus
   b. Cortical Structures
   c. Peripheral Receptors
   d. CTZ Receptors

8. Ondansetron dose may be repeated for the following patients:
   a. Adult
   b. Neither
   c. Pediatric
   d. Both
9. Which of the following is not passed through Peripheral Receptors pass the following stimuli to the vomiting center:
   a. Drugs
   b. Radiation
   c. Uremia
   d. Gastroparesis

10. What could cause vomiting in a child 3-months-old? Circle all that apply:
    a. Accidentally ingesting a drug or poison
    b. Intestinal obstruction
    c. Food allergies
    d. Gallstones

11. You should use caution when giving Ondansetron to patients in liver failure.
    a. True
    b. False

12. True or False: Ondansetron IM in general is ineffective for motion sickness, the IM dose dosing onset time is 30 minutes with peak levels 30-40 minutes.

13. Nausea and vomiting can sometimes be caused by more serious diseases such as heart attacks, kidney or liver disorders and pancreatitis.
    a. True
    b. False

14. True or False: You respond to a 16-year-old patient who is having an anaphylactic event due to a bee sting. You are following the dyspnea standing order for allergic reaction and administer epinephrine (through an auto injector) into the left thigh. The patient now is complaining of nausea. You may implement the nausea and vomiting standing order.

15. True or False: Nausea and vomiting are diseases and patients should be told to see their primary physician as soon as they can for a diagnosis if they are a refusal.
SAEMS EVALUATION FORM

EVALUATION

Please answer the following questions by marking the appropriate response:

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Lowest</th>
<th>Worst</th>
<th>Least</th>
<th>3</th>
<th>4</th>
<th>Highest</th>
<th>Best</th>
<th>Most</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>To what extent did this module meet your needs?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
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<tr>
<td>2</td>
<td>There was a balance between theoretical and practical information.</td>
<td>1</td>
<td>2</td>
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<tr>
<td>3</td>
<td>The time required was appropriate to content.</td>
<td>1</td>
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<tr>
<td>4</td>
<td>The module increased my knowledge and understanding of the topic.</td>
<td>1</td>
<td>2</td>
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<td>5</td>
<td>References or audiovisuals were adequate.</td>
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<tr>
<td>6</td>
<td>Overall, this program was worthwhile.</td>
<td>1</td>
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Additional comments:

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