CROMOLYN
SODIUM

FLAME LECTURE: 33
HARBOLOVIC 8.19.19
LEARNING OBJECTIVES

- To understand the mechanism of action of Cromolyn
- To counsel the patient regarding the benefits, risks, and uses for Cromolyn

Prerequisites:
- NONE

See also – for closely related topics
- Other FLAMEs on Asthma
**REVIEW OF MAINTENANCE MGMT**

**STEP 1**
- SABA PRN

**STEP 2**
- Low-dose ICS
  - Alternates: cromolyn, or LTRA, or theophylline

**STEP 3-4**
- Low-dose OR Med-dose ICS + LABA
  - Alternate: low-to-med dose ICS + LTRA or theophylline

**STEP 5-6**
- High-dose ICS + LABA + oral steroid (if needed)
  - Alternate: switch LABA with theophylline

**MILD INTERMITTENT**

**MILD PERSISTENT**

**MOD PERSISTENT**

**SEVERE PERSISTENT**
OVERVIEW

- Used as an alternative therapy in Step 2 of maintenance asthma management
- Is considered a preventative nebulizer therapy rather than a medication that can acutely assist with exacerbation
- Includes the following medications in the USA:
  - APO-Cromolyn Sterules
  - DOM-Sodium Cromoglycate
  - PMS-Sodium Cromoglycate
- MDI (metered dose inhaler) and DPI (dry powder inhaler) were withdrawn from the market in most countries
MECHANISM OF ACTION

- Prevents mast cell release of acute phase reactants (histamine, leukotrienes, and slow-reacting substance of anaphylaxis)
- Inhibits degranulation of mast cells following contact with antigens
- Does not have acute bronchodilator properties, thus can be used with Beta$_2$-selective adrenergic agonists for acute bronchodilation
INDICATIONS / BENEFITS

- Prophylactic agent for chronic control of asthma
- Cromolyn vs Nedocromil
  - Cromolyn preferred in younger children
  - Nedocromil preferred in adolescents/adults
- Minimal systemic absorption after inhalation
- Prevention of exercise-induced bronchospasm
ADVERSE EFFECTS

- No known toxicity
- Mild local throat irritation and cough
- Category B pregnancy rating
IMPORTANT LINKS / REFERENCES
