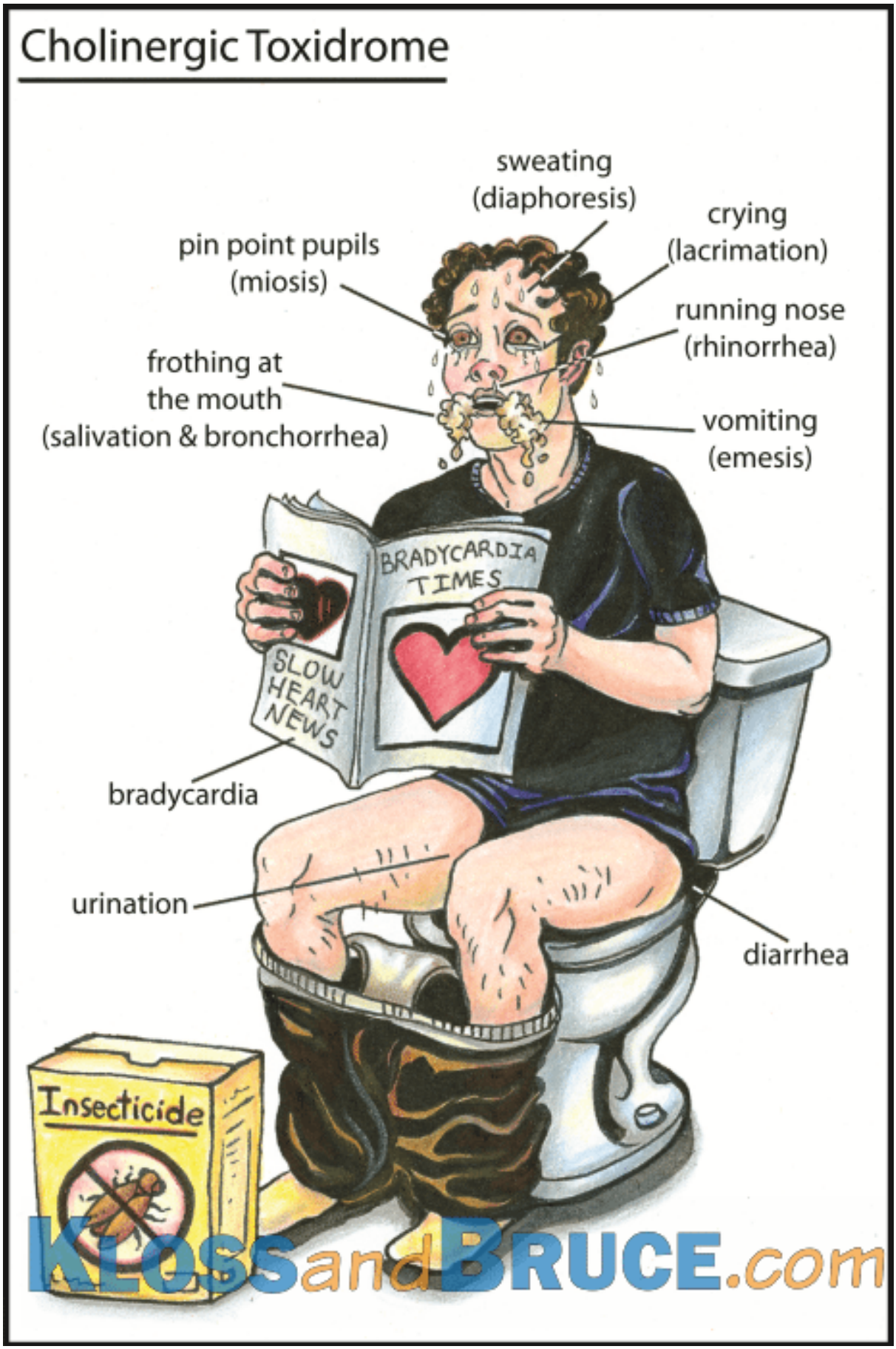
Cholinergic Toxidrome
sweating (diaphoresis)
crying (lacrimation)
pin point pupils (miosis)
running nose (rhinorrhea)
frothing at the mouth (salivation & bronchorrhea)
vomiting (emesis)
BRADYCARDIA TIMES
SLOW HEART NEWS
bradycardia
urination
diarrhea
Insecticide
KLOSSandBRUCE.com

Mental Status

- Confusion
- Coma

Vital Signs

- Bradycardia
- Hypertension/hypotension
- Tachypnoea/bradypnoea

Other Manifestations

- Salivation
- Miosis
- Diaphoresis
- Incontinence
- Vomiting
- GI cramps
- Lacrimation
- Bronchoconstriction
- Fasciculations
- Muscle weakness
- Seizures

Examples of toxic agents

- Organophosphate and carbamate insecticides
- Nicotine
- Medical cholinesterase inhibitors (physostigmine, edrophonium)
- Pilocarpine
- Bethanechol

Pathophysiology

- Inhibition of acetylcholine metabolism by inhibition of acetylcholinesterase. Affects both nicotinic and muscarinic receptors (organophosphates & carbamate insecticides and cholinesterase inhibitors).
- Selective muscarinic agonism (pilocarpine, bethanechol).
- Cholinergic poisons exert an overall parasympathetomimetic effect as parasympathetic fibres rely on acetylcholine receptors (nicotinic and muscarinic) at both the ganglion and in peripheral tissues whereas sympathetic fibres rely on only nicotinic receptors only at the ganglionic level.
- Action at the neuromuscular junction leads to persistent muscle depolarisation.

Treatment

- Decontaminate (eg wash insecticide off skin) and provide supportive treatment.
- Intubate if there is respiratory muscle weakness or significant CNS depression.
- Give atropine (a muscarinic antagonist) for moderate to severe poisoning. Titrate until secretions clear and bronchospasm resolves.
- Give pralidoxime (a cholinesterase activator) for neuromuscular dysfunction in organophosphate poisoning.