

# Bacillus Cereus SGD

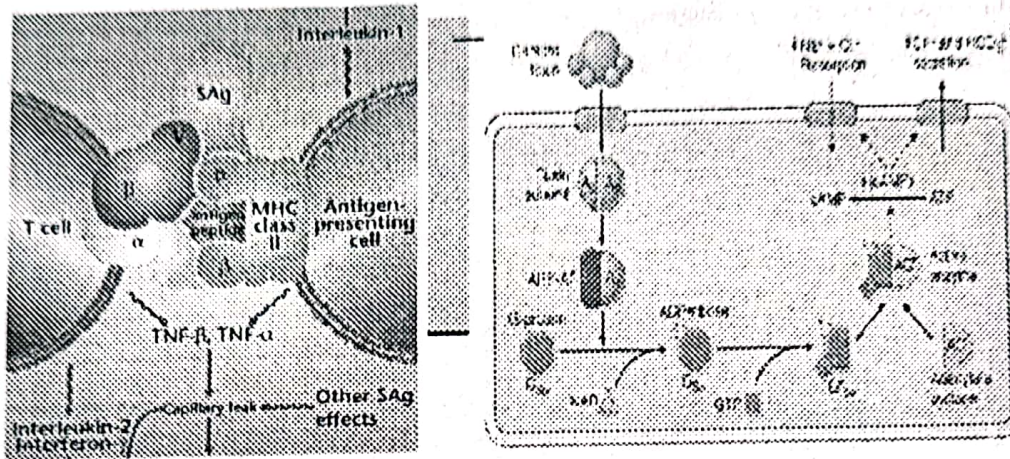
30-year female presented to hospital with vomiting 24hrs after consumption of rice in local a restaurant.



1. What is the causative agent and diagnosis?
2. What is the mode of pathogenesis of this organism?
3. What are the two types of diseases, incubation period and food associated with two types?
4. Should rice be kept warm for long period of time?
5. Classify Gram positive rods.

KEY:

1. Bacillus cereus and food poisoning.
2. Enterotoxins same as cholera toxin; i.e. stimulation of adenylate cyclase, leading to increased concentration of cyclic adenosine monophosphate (AMP) within enterocyte. Enterotoxin similar to Staphylococcal enterotoxin, i.e. act as superantigen.



3. Two syndromes: Emetic type: Associated with rice dishes. Short incubation period (4 hours) Nausea, vomiting and abdominal cramps. Self limiting, recovery in 24h.  
Diarrheal type: Associated with meat dishes. long incubation period, 18-24h Profuse, watery, non-bloody diarrhea, resembling Clostridial gastroenteritis.
4. Spores germinate in reheated rice, then bacteria produce exotoxins, which are ingested.
- 5.

