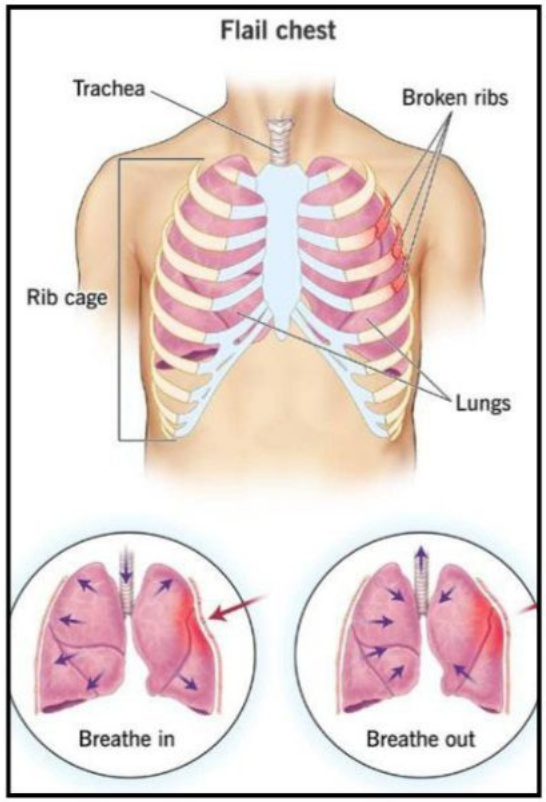
SNS COLLEGE OF PHYSIOTHERAPY
COIMBATORE-35

SUBJECT: CLINICAL CARDIOLOGY AND RESPIRATORY DISEASE

TOPIC:FLAIL CHEST

Empathize

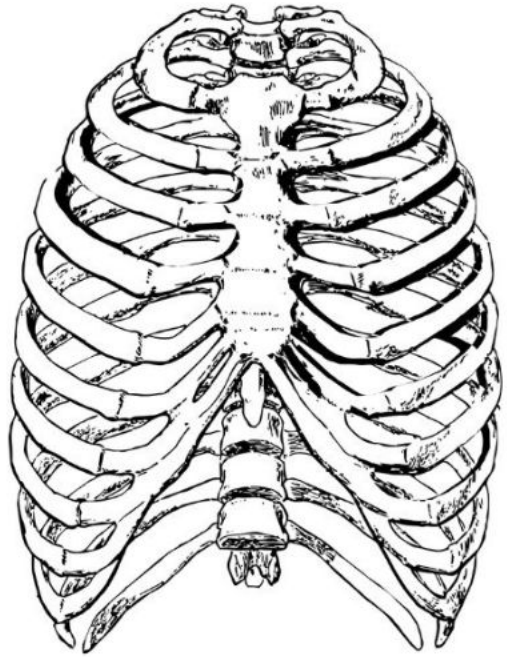
Patient: severe chest pain, difficulty in breathing. Anxiety: “My chest moves opposite when I breathe.”



Ideate

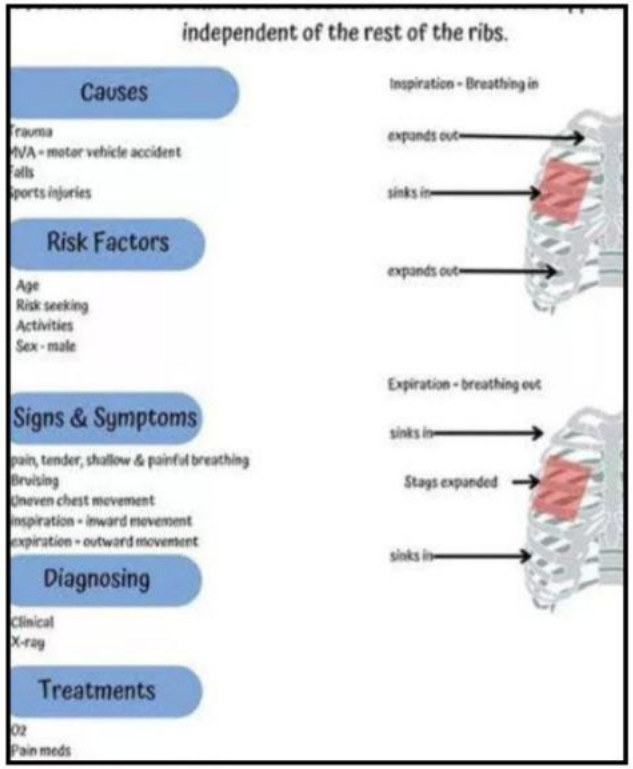
Caused by multiple rib fractures.

Leads to paradoxical chest movement, respiratory distress.



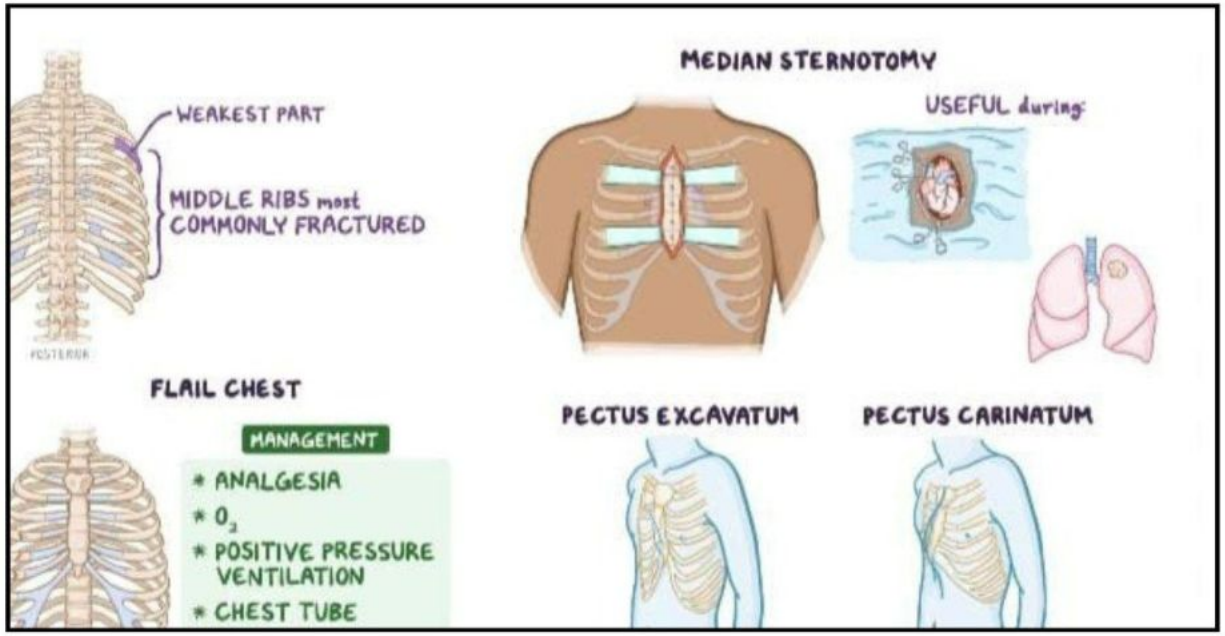
Define & Explain

- Flail chest: ≥2 fractures in ≥3 consecutive ribs → free-floating segment.
- Produces paradoxical movement.



Clinical Features

- Severe pain.
- Paradoxical chest wall motion.
- Shallow, rapid breathing.
- Hypoxia, cyanosis.



Respiratory Findings

Reduced chest expansion.

Crepitus over fracture site.

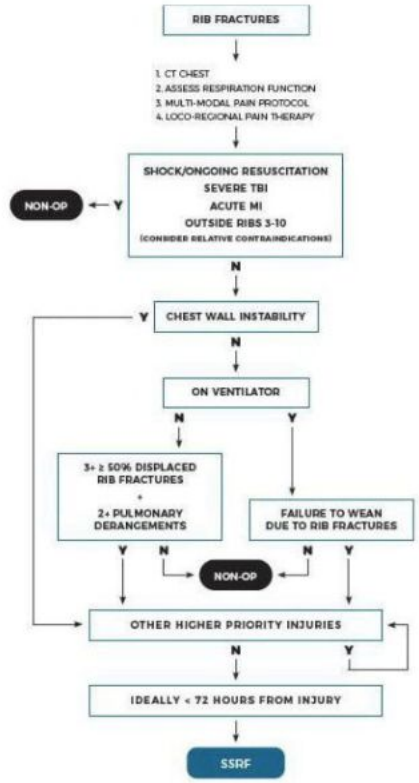
Ineffective ventilation.

Cardio Considerations

- Hypoxemia → tachycardia, hypotension.
- Risk of pulmonary contusion.
- May cause shock.

Flow Chart (Roadmap)

Chest trauma
↓
Multiple rib fractures
↓
Free-floating chest segment
↓
Paradoxical movement
↓
Respiratory distress & hypoxemia
↓
Cardio-respiratory failure



MCQs

Q1. Flail chest occurs due to: a) 1 rib fracture b) Multiple rib fractures c) Lung collapse d) Pleural effusion (Ans: b)

Q2. Paradoxical chest movement is seen in: a) Pneumothorax b) Flail chest c) Asthma d) Pulmonary embolism (Ans: b)

Q3. Flail chest causes: a) Increased ventilation b) Ineffective ventilation c) Bronchospasm d) Pleural effusion (Ans: b)

MCQs

Q4. Main danger in flail chest is: a) Fracture pain b) Hypoxemia c) Muscle spasm d) Fever (Ans: b)

Q5. Management of severe flail chest: a) Bed rest only b) Positive pressure ventilation c) Antibiotics only d) Surgery in all (Ans: b)

Q6. Which rib fractures are most dangerous? a) Upper ribs b) Middle ribs c) Lower ribs d) All equally (Ans: b)