POST OPERATIVE DETERIORATION
EARLY RESCUE & RE-LAPAROTOMY DECISIONS

The Prehospital Care Library
La Bibliothèque de Soins Préhospitaliers

Post operative deterioration is time critical surgical physiology. The dominant threat is delay, delay in recognition, delay in escalation, and delay in returning to theatre.

Early re-laparotomy saves lives. Late certainty kills patients.

ED and acute care priorities:

- Recognise early physiological deterioration
- Identify surgical causes first
- Resuscitate in parallel with decision making
- Escalate early to senior surgical input
- **Operate early when deterioration persists**

CORE PRINCIPLE

A sick post operative abdomen is a surgical emergency until proven otherwise.

Imaging, labs, and observation **must not delay source control** in unstable patients.

EARLY RED FLAGS (PHYSIOLOGY > DIAGNOSIS)

VITAL SIGNS

- **Persistent tachycardia** (often the first sign)
- Hypotension or rising vasopressor requirement
- Tachypnoea
- Fever or **hypothermia**

ORGAN DYSFUNCTION

- **Reduced urine output**
- Rising lactate (if available)
- Altered mental state
- Metabolic acidosis

ABDOMINAL CLUES

- Increasing pain or distension
- Failure to progress (ileus > expected)
- Wound pain, discharge, or dehiscence
- New peritonism (often late)

A normal early abdominal exam does **not** exclude severe pathology.

TIME COURSE MATTERS

- **Early (<48–72 hrs)** → bleeding, technical failure
- **Intermediate (3–7 days)** → anastomotic leak, sepsis
- **Late (>7 days)** → abscess, obstruction, fistula

Deterioration timing guides probability — **but does not delay action.**

KEY CAUSES TO ALWAYS CONSIDER

A HAEMORRHAGE

- Intra abdominal
- Retroperitoneal
- Wound or drain loss underestimated

Clue: Tachycardia + falling Hb + shock ± distension.

B SEPSIS / ANASTOMOTIC LEAK

- Often subtle early
- Fever may be absent
- Tachycardia + oliguria are key early warning signs

C ABDOMINAL COMPARTMENT / OBSTRUCTION

- Distension
- Rising ventilatory pressures
- Reduced urine output
- Worsening acidosis

D NON ABDOMINAL SURGICAL KILLERS

- Pulmonary embolism
- Myocardial infarction
- Aspiration pneumonia

Always rule out, but **never at the expense of intra abdominal catastrophe.**

IMMEDIATE ACTIONS (RESCUE PHASE)

1. **ABCDE resuscitation**
2. Oxygen
3. IV access ×2 (or central if needed)
4. Bloods if available — **do not delay**
5. Urinary catheter + strict I/O
6. Analgesia (controlled)
7. Broad spectrum antibiotics **early**

Resuscitate **in parallel** with surgical decision making.

DOCUMENT REVIEW (DO THIS EARLY)

- Type of operation
- Indication and urgency
- Intra operative difficulties
- Anastomoses created
- Blood loss
- Drains left and outputs

If you don't know what was done, assume **high risk.**

INVESTIGATIONS

BEDSIDE

- Hb trend
- Lactate (if available)
- Urine output response to resuscitation

IMAGING

- **Only if patient stable**
- Ultrasound for free fluid
- CT abdomen if available

A "normal" CT does not rule out evolving leak or ischaemia.

EARLY RESCUE THERAPY

- Oxygen
- **Judicious IV fluids**
- Blood products if bleeding suspected
- Broad spectrum antibiotics (do not wait for imaging)
- Vasopressors if needed

WHEN TO RE LAPAROTOMY

STRONG INDICATIONS

- Ongoing shock despite resuscitation
- High suspicion of intra abdominal sepsis
- Suspected uncontrolled haemorrhage
- Worsening physiology with no alternative explanation

Physiological deterioration overrides equivocal imaging.

THE DECISION PRINCIPLE

"When in doubt, re operate early."

Negative re laparotomy has a lower mortality than delayed source control.

WHAT TO AVOID

- Serial observation of a deteriorating patient
- Waiting for definitive imaging in shock
- Reassurance from transient improvement
- Antibiotics alone for surgical sepsis
- Delay in senior surgical involvement

DISPOSITION

- Immediate senior surgical decision maker involvement
- Theatre rather than ICU if source not controlled
- ICU support **after** source control, not instead of it

CHECKLIST

POST OPERATIVE DETERIORATION / EARLY RE LAPAROTOMY

IDENTIFY DETERIORATION

- [ ] Persistent tachycardia
- [ ] Hypotension or rising support
- [ ] Oliguria
- [ ] Altered mental state
- [ ] Fever or hypothermia

IMMEDIATE RESCUE (ABCDE)

- [ ] Oxygen
- [ ] IV access ×2
- [ ] Fluids ± blood
- [ ] Analgesia (controlled)
- [ ] Urinary catheter

RAPID CONTEXT REVIEW

- [ ] Type of surgery
- [ ] Timing since operation
- [ ] Anastomosis present?
- [ ] Operative difficulty noted?

EARLY TREATMENT

- [ ] Broad spectrum antibiotics started
- [ ] Blood products if bleeding suspected
- [ ] Vasopressors if required

INVESTIGATIONS (IF STABLE)

- [ ] Hb trend
- [ ] Lactate
- [ ] Ultrasound / CT if available

RE LAPAROTOMY DECISION

- [ ] Persistent shock
- [ ] Suspected leak / sepsis
- [ ] Suspected bleeding
- [ ] Deterioration despite resuscitation

Yes to any = re operate

WHAT TO AVOID

- [ ] Delay to senior review
- [ ] Waiting for imaging in unstable patient
- [ ] Reassurance by temporary stability
- [ ] Antibiotics without source control

DISPOSITION

- [ ] Theatre urgently
- [ ] ICU post source control
- [ ] Clear handover:
  - Operation performed
  - Time of deterioration
  - Physiology trends
  - Treatment given