

Post-op Progress

S/ ① Pain [severity ? comfortable
Analgesic req

? can take deep breaths
- if \checkmark \rightarrow inadequate

② Hydrat - ? Thirsty ? Drinking
Urine - vol/f & colour

③ Bowels - Abdo distensⁿ \rightarrow \rightarrow Rumbling \rightarrow Flatus

Appetite (now)
? Hungry $\xrightarrow{\text{start}}$ Drink \rightarrow Soft diet \rightarrow Full diet
 \checkmark BS \rightarrow flatus 30 ml/hr

④ ~~Cx~~ (i) Mobilize / TED stockings / SC Heparin , calf tenderness/swelling
(ii) ~~RS~~ SOB, cough - Physio: chest
~~CVS~~ PIC
Fever

⑤ ~~Rx~~ Wound care

⑥ Discharge plan

Surg - Sutures taken out

R/V - Ix results
Pathology results \rightarrow Reassure
Further mae - Adjuvant Rx

Referral - medical: Physio
- Physio / social worker / O.T.

Charts — Fluid Balance chart
 Dmg chart — Analgesic requirement
 — PCA

Gen — well / unwell

Vitals — HR ↑
 BP ↓
 °C ± ↑ & pattern
 RR ↑

— Hydratⁿ stat: mucousmem, skin turgor
 (Overload: JVP ↑ (elevated), bilat oedem, ± SDA)

— Tubes: urinary catheter — output & colour
 Drain tubes — volume & colour ← bleed
← serosanguinous

Abdo



① distended abdo?

Wound — Redness
 Induratⁿ, discharge
 ? dehiscence
 haematoma, seroma

Sutures/staples

CVS

AB
 S₁ — S₂ ? S₃/S₄

RS



Cough — ? strong

PN ↓
 BS ↓
 Xcrpts, XVR
 Pneumonia } Basal atelectasis
 PE — symmetrical

Back

Pressure sore

U

Calf redness/swelling/tenderness
 Stockings — TED (compression)
 (elastic stockings)

Neuro

Gait — ? Mobilizing

POST-OP Mx

① NBM

IV fluids

Maintenance : 5% Dextrose 2L } 10hr/L
 @ saline 1L }
 Lesser

KCl 2g/bag once ✓ good
 use off
 Check UTE daily

② Monitor

PR Report if > 100
 BP < 100
 °C > 38.5
 RR > 24

Fluid balance chart

Urine output > 0.5-1ml/kg/hr
 (30-60)

Drain tube
 NG tube - Hourly aspirate + free drainage

③ Pain relief

Epidural infus : Bupivacaine + Fentanyl

IV " (PCA)

④ Issues

I Wound Mx

Dressings

Check wound D4

Remove drains when < 50ml/d

" suture 10D

Colostomy Ileostomy } ? protruding adequately
 discharge : when lifted
 Barrier cream

Redvac®

Ongoing stoma edu

II Nutritⁿ

Fluids 30ml/hr

Soft diet → N diet

Otherwise : Ice to suck
 Frequent mouth washes
 lemon-glycerine swabs

} o hygiene

if > 7-10D without o intake : TPN

when to start o diet

- Feels hungry, stomach rumbling
 - Passing flatus / faeces

- BS present
 Soft abdo

- Diuresis

III DVT prophylaxis — Mobilization
Elastic contoured compression stockings
Heparin SC 5000 U bid

IV Chest physio

V Hygiene

Bed bath

Inspect pressure areas

IDC: catheter toilet

off when no longer on
bed toilet/commode epidural

Postop fever

D0-1: Basal atelectasis, Transfus-related
 D2-4: Pneumonia, UTI, thrombophlebitis
 D5-10: wound infectⁿ, PE
 fr sputum retentⁿ in patient = ineffective cough

Causes ① Basal atelectasis

Common - ① Tissue reactⁿ / Inflamm

acute x early

② Infect — Wound infectⁿ

Cellulitis, Abscess

D2-10 (1st few days — chest / stop)

Pneumonia * Aspiratⁿ

UTI — Pyelonephritis

IV site

Thrombophlebitis: supp / chem
Cellulitis

(Deep seated — Subphrenic abscess
pelvic

Peritonitis — Anas leakage

(IE — Artificial valve, valvular DD

Prosthesis — OM

(Infectⁿ rel to pressure areas)

(CMV — fr blood transfusⁿ)

Pyelonephritis

→ Jaundice
Hepatomegaly
Iⁿ: LFT

Uncommon -

① DVT / PE

② Drug fever

Alc withdrawn
Malignant Hememia
Related to blood transfusⁿ

Endo - Thyroid / Adr crisis

FBE

WCC ↑ — NP ↑

Malignancy

[In children, tonsillitis
otitis media]

Iatrogenic - overheat
Fbx - fever in patient

(IX)

Bloods

Microb

BC

Swab fr wound site

Remove IV → send tip — culture

MSU @/C

Sputum @/C

Imaging

(i) CXR

Abdo US — abscess

u CT — subphrenic / pelvic abscess

(ii) Doppler US
V/Q scan

} PE

(iii) Radiocontrast study — Anas dehiscence

L.P. CHEVA

Prevent infect²

- Preop - **Bowel prep**
Antiseptic soap - shower/bath
 * Shorten preop stay in hospital

- Periop - **Prophylactic antibiotics** where appropriate
 Limited **clipping hair** - after anaes induc²
 Prep - **Chlorhexidine / Povidone iodine**

(Plastic drapes - X work)

- OT - Asepsis** :
- (i) Ventilat, clean OT, ↓ ~~OT~~ OT staff & movement
 - (ii) Sterilizatⁿ equipment - autoclaving ethylene oxide trays - glutaraldehyde

Preserve blood supply
 Remove debris, haemostasis
 Minimize use of foreign material
 ↓ duration of op

- Op - Drain btw skin & muscle
 Interrupted stitches
 Close layers separately
- Postop - Dressing → Only inspect on PA-5
 Nourishment / R. DM / Cease steroids

- (iii) Surgeon - Preop washingⁿ antiseptics → ↓ transient flora
 Special clothing
 Rubber gloves
 - eg. S. aureus

Wound infect²

- ① **Remove 1 or more suture** → allow free drainage
 Drain abscess - fu / etc
- ② **Dress wound**
 Antiseptic
- ③ **Antibiotics** - I: septic spreading infect
 valvular D.P

Classification of surgical wounds

| Infect rate (%) | Classification | Examples |
|-----------------|----------------------|----------------------------------|
| 2 | ① Clean | eg: hernia, ganglion |
| 5 | ② Clean contaminated | eg: cholecystectomy, TURP, gynae |
| 10 | ③ Contaminated | eg: colon surg |
| 40 | ④ Dirty | eg: perforated appendix, PUD |

No urine postop

(ADx)

① Prerenal - **hypovolaemia** = dehydration (2nd most likely)
3rd space loss
bleed loss

② Renal - **Acute tubular necrosis** : due to prerenal factors

③ Postrenal - Bladder outlet obstruct } most likely - **Acute urinary Retentⁿ**
if no " : pain
kidneys tied off accidentally

(Mx) (A) Diagnosis

① Hx fr patient - **Sensatⁿ** full bladder → if yes: catheterise / unlock catheter

- **Thirst, light-headedness, tachycardia** → hypovolaemia

- **Excessive abdominal pain** - suggest intraabdominal bleed or retentⁿ

② Patient medical records - **Operating theatre notes**: Complications
Anesthetic record

③ Examination - Volume status - BP postural drop, hypotension } h-volaemia
PR tachycardia

Peripheral perfusⁿ : cold & clammy

JVP not visible

tissue turgor, mucous membrane - dry

- Abdo

 palpable bladder

(B) If bladder distended - Relieve outflow obstruction: **Flush urinary catheter**
Insert a "

② If hypovolaemia - **Assess severity**

Resus -
(if shock)

IV access

Volume expander - **Haemacell**

500ml

run in stat till BP responds
stay ° patient till stable

If blood loss likely - i.e. **Kmitch**
Hb

If mild hypovolaemia → **Double lead** **250ml stat**
250ml/hr

with hourly review of urine output
(Modify according to cardiovascular status)

③ If catheter ^{is} above - **Ureteric obstruction**: **Abdo ultrasound** for hydronephrosis

ATN : Exclude other causes

i.e. **urea catheter** for ure

ii. **Fluid + diuretic** to obtain urine output
± haemofiltration if severe