

CMG 28 – HOME DIALYSIS EMERGENCIES

(Revised: December 2016)



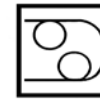
Dialysis is a renal replacement therapy used when kidney function no longer sustains life. The patient is required to undergo treatment on a regular basis (typically 3 times per week, for 4 hours).

SOME IMPORTANT CONSIDERATIONS:

- Patients who are dialysed at home have undergone extensive training and maintain a record of their treatment.
- Use this and any further information provided by the patient and/or carer – they are very familiar with the process.
- Fistula access is the patient's life line. Vessels should be preserved for future fistula creation – therefore **ONLY** cannulate if necessary and use the cubital fossa or hand.
- ***If still in situ, you may use the venous (blue) dialysis cannula/line to administer fluid and/or medication. Flush the line after each dose, with 5 – 10ml of normal saline.***
- Most calls to dialysis patients are not related to their dialysis.

IF STILL DIALYSING, REMOVE THE PATIENT FROM THE MACHINE:

- STOP the dialysis machine pump using the stop pump button:



Do not turn the machine OFF until the patient is removed.

- **Clamp** the two lines running from the dialysis machine, **and** the two lines from the patient's fistula/graft/central line.
- Unscrew the luer locks joining the machine lines and the fistula lines.
- Use the venous (blue) dialysis cannula/line to administer fluid/medications as required.
- Leave the dialysis cannulae/lines in situ. Reinforce with taping and protect during transit, as these are metal needles and can cause damage to the vessels if mishandled.
- If cannula removal is essential, remember there is a **high flow-in access** (1000ml/minute), so use a protective mask **and** goggles. Moderate digital pressure is needed on the exit site for 10 – 15 minutes.

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CALLS TO PATIENTS ON DIALYSIS:

HYPOTENSIVE EPISODE

This can occur due to excess fluid removal.

Assess the situation – if the patient / carer can replace fluid (including their blood, from the dialysis machine), this is the best option.

Remember that these patients are often on fluid restrictions. 100 – 200ml IV fluids will often resolve an hypotensive episode.

Consult the patient’s treatment records to ascertain their usual blood pressure.

When the Paramedic is required to replace fluid:

ICP	Posture patient with legs elevated	AP
ICP	Administer oxygen	AP
ICP	Remove patient from machine (as previous)	AP
ICP	Fluid replacement as per CMG 14	AP

BLEEDING

This may occur due to excess thinning of the blood by the heparin used in dialysis.

Heparin has a **half life of 92 minutes**.

ICP	Only light to moderate pressure on cannula site is required (10 – 15 minutes)	AP
ICP	DO NOT apply too much pressure to the site, as cutting off the flow of blood through the fistula/graft may cause clots	AP
ICP	Use Dia-stop / Tipstop (compression dressing) devices where available. (Digital pressure is the best option).	AP
ICP	DO NOT APPLY TIGHT BANDAGES	AP

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CMG 28 (cont) – HOME DIALYSIS EMERGENCIES



CALLS TO PATIENTS ON DIALYSIS:

HAEMOLYSIS

Caused by damage to the blood cells due to an inappropriate dialysate (overheating, toxins such as copper, chloramines, bleach, formaldehyde)


Signs and symptoms:

- chest pain / back pain
- dyspnoea
- localised burning and pain in access return site
- blood turns a characteristic port wine colour

Treatment:

ICP	Stop dialysis and disconnect patient (as previous)	AP
ICP	Treat symptomatically, as per appropriate CMG (e.g. CMG 6 <i>Cardiac Arrhythmias</i> , CMG 9 <i>Respiratory Distress</i> , CMG 16 <i>Suspected Acute Coronary Syndrome</i> , etc.)	AP
ICP	Fluid replacement if indicated, as per CMG 14	AP

VENOUS AIR EMBOLISM

ICP	Suspect if there is air in the venous (blue) line	AP
ICP	Stop dialysis treatment immediately using the stop pump button: 	AP
ICP	Disconnect patient (as previous)	AP
ICP	Treat with 100% oxygen	AP
ICP	Posture left-lateral and flat (i.e. no head elevation)	AP

CHEST PAIN

This may be caused by excess fluid removal during dialysis or other cardiac event.

ICP	Stop dialysis and disconnect patient (as previous) (If sufficient time, have patient/carer return their blood from the dialysis machine)	AP
ICP	Use venous (blue) cannula/line as access for fluid/medication administration, if required	AP
ICP	Treat chest pain as per appropriate CMG (e.g. CMG 16 <i>Suspected Acute Coronary Syndrome</i> , etc)	AP