WHAT IS AUTONOMIC DYSREFLEXIA?

This is a condition of **sudden high blood pressure**, which may continue to rise and may cause a brain hemorrhage or fits.

The normal BP for this group of people is commonly 90/60 – 100/60 mm Hg lying and lower when sitting. A BP of 130/90 mm Hg is therefore high for them. If untreated the BP can rapidly rise to extreme levels, e.g 220/140 mm Hg.

SYMPTONS & SIGNS

The person may present with all or some of the following:

- Pounding headache, which gets worse as the blood pressure rises.
- Blurred vision
- Flushing and blotching of the skin above the level of the spinal cord injury
- Profuse sweating
- Goose bumps
- Chills without fever
- Bradycardia (slow pulse rate)
- Hypertension (high blood pressure)

COMMON CAUSES

- Bladder irritation e.g. distended bladder, urological procedure, urine infection
- Bowel irritation e.g. constipation, chemically irritant suppositories, digital dilatation
- Skin irritation e.g. pressure injury, ingrown toenail, burns
- Other, e.g. contracting uterus, fractured bones, acute intra abdominal disease

Patients and carers know about this condition and often can suggest the cause.

TREATMENT

Ask if the patient has already had any drugs to control the autonomic dysreflexia

Two people are required to control the situation.

1) Sit upright or elevate the head of the bed. Loosen clothes and remove compression stockings and abdominal binder.
2) If the person has a IDC or SPC
   i) Empty leg bag and estimate volume. To determine whether or not the bladder is empty, ask if the volume is reasonable considering fluid intake and output that day.
   ii) Check that the catheter or tubing are not kinked or flow is not impaired by a blocked inlet to the leg bag or perished valve in the leg bag.

   If the blood pressure > 170mm Hg systolic, start drug therapy (see 5)

   iii) If the catheter is blocked, irrigate GENTLY with no more than 30mls of sterile water. Drain the bladder slowly – 500ml initially and 250ml each 15 minutes afterwards to avoid a sudden drop in blood pressure.

   If this is unsuccessful, recatheterise, using a generous amount of lubricant containing local anesthetic, e.g. 2% lignocaine jelly.

   iv) If the blood pressure falls after the bladder is emptied, the person still requires close observation as the bladder can go into severe contractions causing hypertension to recur. Consider giving an oral anticholinergic medication, e.g. oxybutynin HCl.

   v) ***Monitor the blood pressure for the next 4 hours.***

3) ***If the person does not have a permanent catheter:***

   If the bladder is distended, lubricate the urethra with a generous amount of local anesthetic jelly, wait two minutes, then pass a catheter to empty the bladder. Drain the bladder slowly (see 2 iii).

4) ***If constipation is suspected, check the rectum for faecal loading:***

   If the rectum is full, check the blood pressure before attempting manual evacuation.

   If it is more than 150mm Hg systolic, start drug treatment (see 5).

   Gently insert a generous amount of lignocaine jelly into the rectum and gently remove the faecal mass.

   Note: if symptoms are aggravated, stop immediately.

IF NO RESPONSE, i.e. if the elevated blood pressure does not start to fall within 1 minute of the above procedures, or the cause (see opposite) cannot be determined, treat as follows:

5) **Glyceryl trinitrate.**

Note: DO NOT use glyceryl trinitrate if sildenafil (Viagra), or vardenafil (Levitra) has been taken in the previous 24 hours or tadalafil (Cialis) in the previous 4 days.

Give one spray of glyceryl trinitrate (Nitrolingual Pumpspray) under the tongue. During administration the canister should be held upright and the spray should not be inhaled.

OR

Place a glyceryl trinitrate tablet (Anginine) under the tongue.

OR

Apply 5mg transdermal patch to chest or upper arm according to the manufacture's instructions. Remove patch once BP settles or if the BP drops too low.

The hypotensive response should begin within 2 to 3 minutes and may last up to 30 minutes. A second spray/ tablet may be given in 5-10 minutes if the reduction in the blood pressure is inadequate or if the blood pressure rises again.

Note: if glyceryl trinitrate is not available or is contraindicated (e.g. within 24 hours of sildenafil use), give one 25mg of captopril under the tongue.

Avoid sildenafil (Viagra), vardenafil (Levitra) and tadalafil (Cialis) for at least 48 hours after a severe episode of autonomic dysreflexia.

All recommendations are for people with a spinal cord injury at the 6th thoracic level or above. Individual therapeutic decisions must be made by combining these recommendations with clinical judgement.

NOTES:

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If glyceryl trinitrate or captopril do not lower the blood pressure sufficiently, the cause of the autonomic dysreflexia has not been identified, or you need further advice.

Please contact 000
and / or

Queensland Spinal Cord Injuries Service
Princess Alexandra Hospital, Brisbane
Spinal Rehabilitation Consultant on-call 07 3176 2111

or

arrange transport to the nearest emergency department

MEDICAL EMERGENCY CARD

Autonomic Dysreflexia

A hypertensive crisis in people with spinal cord injury at or above the 6th thoriacic level.

Name .....

UR .....

This person is susceptible to autonomic dysreflexia; a condition of reflex sympathetic overactivity which can cause extremely high blood pressure.

THIS DEMANDS IMMEDIATE ACTION

For further information contact
Registrar (Business Hours)
Spinal Consultant on call (After Hours)
Princess Alexandra Hospital 07 3176 2111

Queensland Government