



PHARMACY BULLETIN

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“Floods can leave some side effects on all living things and even claim lives.”

2) Haloperidol: Risks when used in elderly patients for the acute treatment of delirium

“MHRA received 242 reports related to patients from 60 years of age or older with the majority of reports related to adverse effects in the nervous system”

4) Myocarditis and Covid-19 Vaccine

“More countries reporting myocarditis and pericarditis in individuals who received COVID-19 mRNA vaccines.”

3) Cariprazine

“Clinical studies have shown statistically significant efficacy in the treatment of acute exacerbation and prevention of relapse of schizophrenia.”

5) Haemorrhoids

“Hemorrhoid is common, but it is advised to not be taken lightly of, and to seek for medical attention.”

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Highlight: Flood and Risk of Diseases

By: Nur Alia binti Kamarol Zaman

Floods

- Floods occur when water overflows onto typically dry ground.
- Floods commonly occur in Malaysian states every year between September to February, primarily due to heavy downpours.



The Ramifications of Floods



Destruction of Property

Heavy floods could sink residential houses, damage infrastructure and household items.



Disease

Floods can contribute to the spread of contagious/communicable diseases which can be detrimental to human health.



Death

Floods can claim lives, especially in populations living close to the rivers or lower-lying areas.

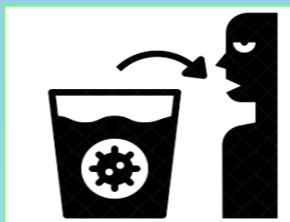


Costs Incurred

Additional costs related to the repair of public infrastructure, provision of medical equipment and basic necessities for flood victims are incurred by the government.

Highlight: Flood and Risk of Diseases

Floods can cause garbage and faeces to overflow out of reservoirs. This will trigger various infectious diseases. Among the infectious diseases that thrive during and after the flood:



Water- and Food-Borne Diseases

Common diseases include typhoid fever, cholera, hepatitis A, dysentery and food poisoning. They often present with diarrhoea, vomiting, fever, abdominal pain and headache.



Dengue Fever

Dengue fever is caused by the *Aedes* mosquito. Manifestation of dengue includes sudden onset of pyrexia, severe headache, ophthalmalgia, myalgia, arthralgia and itching hives.



Leptospirosis

A disease caused by *Leptospira* sp bacteria found in the urine of rats, cats, dogs and cows. Symptoms of leptospirosis include fever, headache, nausea, vomiting, myalgia, arthralgia, conjunctivitis, rash, abdominal pain, jaundice and dark-coloured urine.



Conjunctivitis

Conjunctivitis or sore eyes is a disease that often occurs during flooding. Among the symptoms of conjunctivitis include ophthalmalgia, epiphora, red eyes, excessive eye discharge, eye itching and photophobia.

Highlight: Flood and Risk of Diseases

Security Measures to Be Taken:

During the floods, heed instructions of the appointed officers or authorities:

- Promptly proceed to evacuation centres when directed.
- Switch off all electrical switches, the main water supply and gas valve before leaving home.
- Always protect the elderly, children and pregnant women. Do not let children play in flood waters.



Take Care Of Your Health:

- Always consume only cooked meals (avoid raw food) and drink only boiled water or bottled drinks.
- Maintain good personal and environmental hygiene. Practice frequent handwashing, use sanitation facilities and waste bins properly.
- Seek immediate medical attention if experiencing fever, diarrhoea or vomiting.
- Always follow the advice given by the health officers and the authorities.
- Ensure all essential medication is stored in a high place protected from the flood.



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Medication Safety: Haloperidol - Risks when used in elderly patients for the acute treatment of delirium

By: *Fatin Nadiah binti Mustafa*

What is delirium?

- Delirium or '**acute confusional state**' is a complex condition common among the geriatric population.
- Delirium may occur simultaneously with **dementia** or other precipitating factors such as **polypharmacy or infection**, which are common in the elderly.
- Underlying causes of delirium should be identified prior to management of delirium.



Treatment of delirium

- MHRA¹ clinical guidance recommends non-pharmacological interventions as 1st line treatment option.
- If non-pharmacological interventions are unsuccessful and the patient is distressed or there is a threat to their safety or those around them, then **low-dose, short-term haloperidol is recommended unless contraindicated.**
- According to the Summary of Product Characteristics of Haloperidol:
 - It is a first-generation antipsychotic authorised for the treatment of neurological and psychiatric disorders in adults, including the acute treatment of delirium when non-pharmacological treatments have failed.
 - It is contraindicated in patients with Parkinson's disease and dementia with Lewy bodies.
- Therefore, the MHRA recommends that patients are reviewed and screening tools used (**STOPP**; Screening Tool of Older Persons' potentially inappropriate Prescriptions) in order to aid with identifying cases where a prescription may be potentially inappropriate.

¹ Medicines and Healthcare products Regulatory Agency

Medication Safety: Haloperidol - Risks when used in elderly patients for the acute treatment of delirium

Dosing recommendations

- Dose adjustment is recommended in the elderly as they may have a lower clearance and longer elimination half-life of haloperidol.
- **Initiate doses cautiously in the elderly and prescribe the minimum effective dose for the shortest possible duration.** Any up-titration of doses should be gradual and reviewed frequently.

Neurological side effects

From 1964 till 4th September 2021, a total of 3385 suspected adverse drug reactions relating to haloperidol had been reported to the MHRA. Of these, 242 reports related to patients from ≥ 60 years old and the majority of the reactions (171) related to neurological adverse effects.



- The elderly may be particularly susceptible to **extrapyramidal side effects** with haloperidol (e.g. acute dystonias, parkinsonism, or tardive dyskinesia) which may lead to dysphagia and subsequently aspiration pneumonia.
- Acute dystonia which can occur anytime during treatment and following dose increment, may necessitate treatment cessation. Dystonic symptoms include torticollis, facial grimacing, trismus, tongue protrusion, and oculogyric crisis.
- According to the Summary of Product Characteristics, antiparkinson drugs may be prescribed as a therapeutic and not as a preventive measure for extrapyramidal symptoms. The antiparkinson drug may have to be continued following cessation of haloperidol if its excretion is faster than that of haloperidol in order to avoid the development or aggravation of extrapyramidal symptoms.

Medication Safety: Haloperidol - Risks when used in elderly patients for the acute treatment of delirium

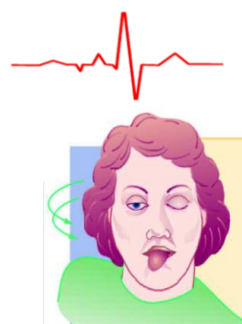
Cardiac side effects

- Haloperidol is associated with **QTc prolongation and ventricular arrhythmias**. It is contraindicated in patients with known QTc prolongation, congenital long QTc syndrome and concomitant drugs that prolong the QT interval.
- Obtain a **baseline ECG** before treatment, particularly in patients with cardiovascular risk factors or a history of cardiovascular disease and perform blood pressure monitoring during treatment.
- **Dose-related orthostatic hypotension** can occur and may contribute to instability and risk of falls.
- Other adverse reactions requiring prompt medical intervention include **rhabdomyolysis** and rare cases of **neuroleptic malignant syndrome**.



Advice for healthcare professionals

- ✓ Consider haloperidol for delirium in frail, elderly patients only when non-pharmacological interventions are ineffective and haloperidol is not contraindicated.
- ✓ Obtain a baseline ECG and correct any electrolyte disturbances prior to treatment initiation.
- ✓ Perform cardiac, BP and electrolyte monitoring during treatment.
- ✓ Prescribe haloperidol at the lowest possible dose for the shortest possible duration with regular review of doses.
- ✓ Monitor for and investigate early any extrapyramidal side effects.

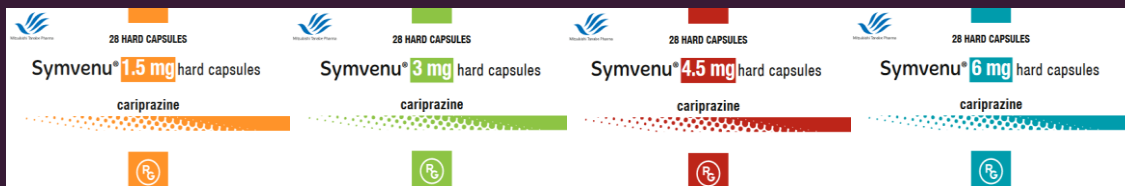


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Know Your Medicine: Cariprazine

By: Rosalyn Chan Li Zhen



- **Generic Name:** Cariprazine
- **Product Name:** Symvenu®
- **Approved Indication:** Treatment of schizophrenia in adults ≥ 18 years old
- **Dosage Form and Strengths:** 1.5 mg, 3 mg, 4.5 mg, 6 mg hard capsules
- **Dosage:**
 - Initial dose:** 1.5 mg OD with or without food.
 - Subsequent doses:** Increase dose by 1.5 mg to a maximum dose of 6 mg/day, if needed.
- **Switching of antipsychotics:**

Other antipsychotics

Gradual cross-titration

Cariprazine

No gradual cross-titration is needed. Initiate the new antipsychotic at lowest dose. Plasma concentration of cariprazine and its active metabolites will decline by 50% in ~1 week.

- **Contraindication:** Known hypersensitivity to cariprazine or excipients, concomitant administration of strong or moderate CYP3A4 inhibitors or inducers.
- **Mechanism of action:** Not fully known but may involve a combination of partial agonist activity at D3, D2 and 5-HT1A receptors, and antagonist activity at serotonin 5-HT2B, 5-HT2A and H1 receptors.

BENEFITS

- Efficacious in treatment of acute exacerbation and relapse prevention of schizophrenia.
- Shows significantly greater improvement in negative symptoms of schizophrenia over risperidone.

⚠ WARNING

Antipsychotics are associated with increased mortality, TIA and stroke in elderly patients with dementia-related psychosis.

Know Your Medicine: Cariprazine

Use in Specific Population

1. Renal impairment:

- Mild-moderate (CrCl 30 – 89 mL/min): No dose adjustment required.
- Severe (CrCl < 30 mL/min): Not recommended.

2. Hepatic impairment:

- Mild-moderate (Child-Pugh score 5-9): No dose adjustment required.
- Severe (Child-Pugh score 10-15). Not recommended in patients with severe hepatic impairment.

3. Paediatric: No safety and efficacy data in this population.

4. Women of childbearing potential: Highly effective contraceptive methods during treatment and for ≥10 weeks following the last dose of Cariprazine is recommended due to slow elimination of active moieties.

5. Pregnancy and breastfeeding: Not recommended.

Side Effects

- ✓ **Very common:** Akathisia and parkinsonism.
- ✓ **Common:** Altered appetite, weight gain, nausea, vomiting, dizziness, tachyarrhythmia constipation, hypertension, dyslipidaemia, sedation, dystonia, anxiety, blurred vision and raised CPK, AST and ALT.



Drug Interactions

Cariprazine is **metabolized by CYP3A4 (major) and CYP2D6 (minor)**. It interacts with inducers or inhibitors of those enzymes (e.g. ketoconazole, carbamazepine, phenytoin, rifampicin). Cariprazine is a **PGP inhibitor *in vitro*** and may interact with digoxin and dabigatran.



Advise to monitor for suicidal thoughts and behaviours which are more likely at the beginning of the treatment and for neuroleptic malignant symptoms.

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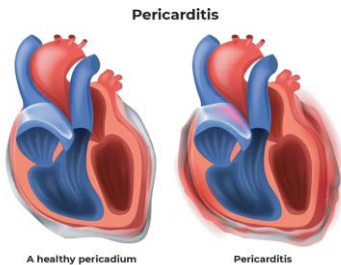
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Adverse Drug Reaction: Myocarditis and Covid-19 Vaccine

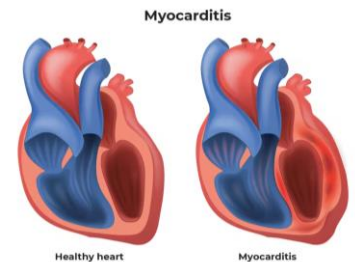
By: Ahmad Yuzaily bin Basrial



On 26th May 2021, the COVID-19 subcommittee of the WHO Global Advisory Committee on Vaccine Safety (GACVS) issued a statement reviewing initial reports of mild myocarditis following COVID-19 mRNA vaccines.



- **Myocarditis:** inflammation of cardiac muscle
- **Pericarditis:** inflammation of pericardium
- Both conditions often mild and self-limiting.



A **strong signal** of myocarditis/ pericarditis has been reported with mRNA COVID-19 vaccines in the United States (US).

- Typically occurred within 7 days of vaccination, more commonly among younger males and more frequently following the second dose of COVID-19 mRNA vaccines.



- However, the US Advisory Committee on Immunization Practices (ACIP) concluded that → **benefits of mRNA COVID-19 vaccines continue to outweigh the risks** of myocarditis and pericarditis even among young people.

According to the data in the US Vaccine Adverse Events Reporting System (VAERS),

- 40.6 cases per million second doses among males
- 4.2 cases per million among females
 - of myocarditis have been reported as of 11th June 2021 in persons 12-29 years old who received the mRNA COVID-19 vaccines.

For reporters over 30 years old,

- the reporting rates were 2.4 and 1.0 per million second doses, respectively, for males and females.

Adverse Drug Reaction: Myocarditis and Covid-19 Vaccine

- **Very rare cases of myocarditis and pericarditis** have been observed following vaccination with the mRNA COVID-19 vaccines.
- **Benefits of mRNA COVID-19 vaccines outweigh the risks** in reducing COVID-19-related hospitalizations and deaths.
- Vaccinated individuals should be instructed to **seek immediate medical attention if they develop the following symptoms post-vaccination:**
 - ❑ New onset and persisting chest pain,
 - ❑ dyspnoea or
 - ❑ Palpitations.
- The GACVS COVID-19 subcommittee noted a **plausible causal association** between myocarditis and the mRNA COVID-19 vaccines.
- Infectious disease specialists and/or rheumatologists could be consulted to exclude other potential causes of myocarditis and pericarditis e.g. COVID-19 infection and other viral aetiologies.



All healthcare professionals are **encouraged to report any events of myocarditis and pericarditis** alongside other adverse events related to the COVID-19 vaccines.



References:

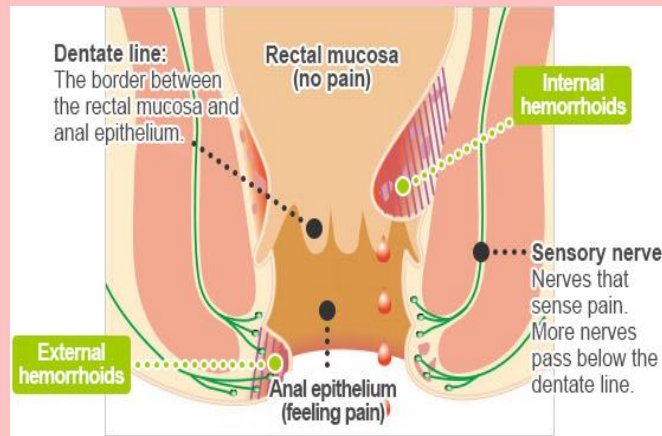
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Counselling Points: Haemorrhoids

By: Rosalyn Chan Li Zhen

Background:

Haemorrhoids (piles) are enlarged veins around lower rectum and anus. It is common in those aged 45-65 years old.



•**Internal haemorrhoids: Originate above the dentate line.** It presents with varying degrees of prolapse which may cause bleeding, mucus discharge, faecal soiling and anal pruritus. It does not cause pain unless they become prolapsed.

•**External haemorrhoids: Originate below the dentate line.** It presents with symptoms of acute pain, palpable lump in the perianal area, bleeding, itchiness and swelling on passing stools.

•**Mixed haemorrhoids: Concomitant external and internal haemorrhoids.**

Symptoms:



- ✓ Bright red, painless rectal bleeding
- ✓ A feeling of rectal fullness, discomfort, or of incomplete evacuation on bowel movements
- ✓ Anal itching or irritation
- ✓ Discomfort due to rectal protrusion
- ✓ Anal pain (external piles)
- ✓ Soiling (due to mucus discharge or impaired continence)

Counselling Points: Haemorrhoids

Predisposing factors:



- Constipation
- Straining while trying to pass stools
- Low-fiber diet



- Ageing (weakening of the support structures makes haemorrhoids more likely to prolapse)
- Conditions that cause raised intra-abdominal pressure (e.g. pregnancy, childbirth, ascites, or a pelvic mass)



- Chronic cough
- Heavy lifting
- Hereditary factors (possibly due to a congenital weakness of the venous walls).

Non-surgical Pharmacological Options:

- **Diosmin 450 mg and Hesperidin 50 mg Tablet:**

Acute attack:- 6 tablets daily for the first 4 days, then 4 tablets daily in 2 divided doses for 3 days and 2 tablets thereafter.

Chronic:- 2 tablets daily with meals.

- Adverse Reactions: Diarrhoea, dyspepsia, nausea and vomiting.

- **Zinc oxide, benzyl benzoate and balsam peru suppository:**

Insert 1 suppository night and morning after bowel movements for a maximum of 7 days.

- Adverse Reactions: Sensitivity reactions.



Counselling Points: Haemorrhoids

Self-care:

✓ **Prevent constipation:**

- Adequate dietary fibre (25-30 g/day) and fluid intake (2 L/day).
- Adequate exercise to stimulate bowel movement (Mild-moderate exercise for 30 minutes, 5 times/week).
- Consider bulk-forming laxatives e.g. bran, ispaghula, methylcellulose, psyllium and sterculia. However, these may cause bloating, abdominal distension, gut obstruction.



✓ **Avoid stool withholding and undue straining during bowel movements.**

✓ **Relieve pain:**



- Have warm baths to ease pain and itchiness.
- Soak bottom in a warm basin of water added with salt for 20-30 minutes after bowel movements to relax sphincter muscles.
- Apply an ice pack wrapped in a towel to reduce swelling-associated discomfort.
- Take simple analgesia e.g. paracetamol reduce the pain. Avoid NSAIDs if rectal bleeding is present.

✓ **Practice good anal hygiene:** Keep perianal area clean and dry to aid healing, reduce irritation and itching (Gently clean with alcohol-free, fragrance-free moistened wipes/moist toilet paper instead of dry toilet paper after each defecation or wash with warm water and mild soap).



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Quiz

Questions	TRUE	FALSE
1 Leptospirosis is a disease caused by <i>Leptospira sp</i> bacteria found in the urine of four-legged mammals such as rats, cats, dogs and cows. Symptoms are fever, headache, nausea, vomiting, muscle pain, eye redness, rash, abdominal pain, jaundice and dark-coloured urine.		
2 Haloperidol is recommended in patients with Parkinson's disease and dementia with Lewy bodies according to Summary of Product Characteristics (SmPC).		
3 Cariprazine has also shown a significantly greater improvement in positive symptoms of schizophrenia over risperidone.		
4 Very rare cases of myocarditis and pericarditis have been observed following vaccination with the mRNA COVID-19 vaccines. These cases occurred more often after the second dose of the vaccine, typically within few days after vaccination.		
5 Bright red, painless rectal bleeding, a feeling of rectal fullness, discomfort, or of incomplete evacuation on bowel movements, anal pain, itching or irritation are symptoms of haemorrhoids.		

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