

**Patient Starting  
clozapine**

**Review/Obtain Baseline**

- CBC Diff
- High sensitivity Troponin or Troponin I or T
- CRP
- ECG
- BNP (Beta natriuretic peptide)
- Cholesterol, HDL, LDL, Triglycerides
- Urea, creatinine & electrolytes
- AST, ALT, GGT, Alkaline phosphatase
- Fasting Glucose / HbA1C
- Vitals – PR, BP – sitting and standing; Temp
- BMI and waist circumference

**Within 24hr of increase in dose**

- Postural BP and HR
- Temperature
- Assess for signs and symptoms of infection and myocarditis
- Assess for other adverse side effects

**Weekly blood work**

- CBC (6 months)
- Hs Troponin or Troponin I or T (6 weeks)
- CRP (6 weeks)

*If patient develops signs of:*

**POSSIBLE MYOCARDITIS**

**POSSIBLE NEUTROPENIA / AGRANULOCYTOSIS**

**1. Cardiovascular symptoms**

- Light headedness with postural hypotension or low resting BP (Systolic BP less than 100mmhg)
- Chest pain/discomfort/pressure
- Fatigue with decreased exercise tolerance
- Shortness of breath
- Peripheral edema

**2. Heart rate change**

- Palpitations with increased heart rate (HR more than 120 bpm or increase more than 30bpm above baseline)

**3. Signs or symptoms of unidentified illness**

- Flu like symptoms
- Fever

**4. CRP - 50 to 100 mg/L**

**5. Hs Trop I** > baseline < 75 ng/l in men and < 51ng/l in women or if baseline > UNL, then any elevation < 25 ng/l (UBC, & VCH).

**For Hs Trop T** > baseline but < 2UNL (SPH & Life labs).

**For Trop I or T** > baseline but < 2UNL (elsewhere).

**Any of 1, 2, 4 or 5 OR 3 with either 4 or 5**

**Nurse:** Contact attending or on-call Psychiatrist

**Psychiatrist:** If any of the above criteria are met:

- Check BNP and ECG once at the start and CRP & Hs Troponin I or T daily until they either improve or are no longer an issue.
- Monitor vitals and for signs of myocarditis (flu like symptoms, chest pain, SOB, sudden change in vitals etc.) at least daily.
- Consider keeping clozapine at the same dose or stopping it until the issue is resolved.
- Seek cardiology/ internal medicine or Psychiatry race line.

**1. Elevation in Troponin levels as below**

**Hs Trop I** Elevation of Hs troponin I:  
 > 51 ng/l for women  
 > 75 ng/l for men  
 Or > 25 ng/L, if baseline was higher than ULN (UBCH & VGH)

**Hs Trop T** > 2 UNL (SPH & Life labs)

**Trop I OR T** > 2 UNL (elsewhere)

**AND / OR**

**2. CRP more than 100mg/L**

**URGENT**

**Nurse:** Contact attending or on-call Psychiatrist ASAP  
 Admit to ER ASAP

**Psychiatrist:**

- **STOP** clozapine till reviewed by cardiologist / internist.
- Order high sensitivity Troponin Q8H x 3, CRP, daily BNP x 1, ECG
- Urgent cardiology referral
- Consider ordering echocardiogram / MRI scan of heart

**Signs or symptoms of 1 or more of the following:**

- Fever
- Muscle aches
- Sore throat
- Headache
- Diarrhea
- ANY infection (UTI, cellulitis, eye, dental etc.)

**AND / OR**

**Yellow Status:**

WBC  $2.0 \times 10^9/L$  to  $3.5 \times 10^9/L$   
 ANC  $1.5 \times 10^9/L$  to  $2.0 \times 10^9/L$

**Yellow Drop:**

WBC Fall  $3.0 \times 10^9/L$  or more  
 Measured in the last 4 weeks  
 reaching value less than  $4.0 \times 10^9/L$

ANC Fall more than  $1.5 \times 10^9/L$   
 Measured in the last 4 weeks  
 reaching value less than  $2.5 \times 10^9/L$

**Continue clozapine with increased monitoring**

- CBC twice a week and monitor patient for developing signs of infection until features normalise
- See GP/ER for infection as needed

**Red Status:**

WBC less than  $2.0 \times 10^9/L$   
 ANC less than  $1.5 \times 10^9/L$

**CRITICAL**

WBC less than  $1.0 \times 10^9/L$   
 ANC less than  $0.5 \times 10^9/L$

**Admit to hospital**

for neutropenic regime, consider G-CSF administration and prophylactic antibiotic therapy.

**Stop clozapine**

- Repeat CBC within 24 hours to confirm and withhold clozapine. If confirmed, neutropenia discontinue clozapine treatment. Repeat CBC daily and watch for signs of infection until normal cell counts are reached. Thereafter continue CBC weekly for a total of 4 weeks
- Admit to ER/Hospital if signs of infection
- If not monitor vitals daily for signs of infection and myocarditis.