# Depression after mitral valve replacement

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*Articles in this section use cases to illustrate the emergency management of patients presenting in general practice with cardiac problems. They are inspired by, but not based on, real patient situations.*

**Ferdinand, a 52-year-old self-employed carpenter, comes to see you for the first time in the company of his girlfriend Alice. Ferdi was discharged from the local hospital two days ago after an emergency tissue mitral valve replacement and has been told to take warfarin for eight weeks. He needs to find a GP to manage his warfarin. Ferdi looks exhausted and 'down' and complains of pain in his chest. He is worried he still has something wrong with his heart but he has no shortness of breath or palpitations.**

*Ferdi's pain is clearly musculoskeletal, secondary to his sternotomy eight days previously. He says he had been quite well until three weeks ago, when he developed sudden, severe, shortness of breath that he tried to ignore for several hours. Alice points out that he had been complaining of increasing shortness of breath over several weeks, especially with exertion, but that he had refused to see a doctor. His discharge summary includes the comment that he had significant bileaflet mitral valve prolapse noted on a cardiac echocardiogram 18 months prior but he had not attended any follow up. His echocardiogram at discharge shows a dilated left ventricle and an ejection fraction of 37%. His current medications are warfarin 6 mg at night (INR at discharge two days ago was 2.1), bisoprolol 2.5 mg daily (with instructions to increase this as his blood pressure tolerates), long-acting morphine 20 mg twice daily, oxycodone 5 mg for breakthrough pain and venlafaxine 225 mg daily (for depression after his divorce two years prior).*

*Alice is worried that Ferdi is becoming severely depressed and she wants you to change his medication as she feels it is not working any more. She encourages him to speak but ends up taking over the conversation for him. Ferdi does say that if he cannot work as a carpenter he will be destitute – he is renting currently.*

*You examine Ferdi. His sternal wound site is clean and he has the expected chest wall tenderness. His blood pressure is stable at 110/60 mmHg. He has a full jugular venous pressure, mild bilateral ankle oedema and a forceful regular apex beat (85 beats per minute) slightly displaced to the left. He has a third heart sound but no murmur of mitral regurgitation. He has a left pleural effusion and some crepitations in the right base.*

***What things are you most concerned about at this consultation so far?***

***Answer:*** This patient has some signs of persisting left heart failure and, importantly, you have quite serious concerns regarding his social and emotional situation.



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You need to know more about this man. What are his living arrangements, does he live by himself normally and is Alice staying with him? Is his relationship with Alice stable? As he is not allowed to drive at present, does he normally have someone to help with this? You could reassure him that you can arrange a disability pension (Centrelink) for him for three months. This may help financially as he is unlikely to be able to get back to work during this time. Does he have any disability insurance, income protection or savings? This will lead the conversation into his mental state.

Ferdi sounds very depressed and you need to investigate this further. How safe is he regarding this? Has he had a history of suicidal behaviour in the past? Does he drink alcohol excessively? Has the venlafaxine been ceased in the past, and if so, for how long and when was it restarted? Does he feel he should see a psychiatrist for his low mood, and has he seen one before?

***Alice tells you she is staying at his flat at present and plans to do so until he is much more mobile physically. She tells you the relationship is very close but she is quite unable to support him financially as she is on unemployment benefits herself. Ferdi reiterates that a disability pension will not solve his problems but is his only option. He has no disability insurance or savings, but has enough money for rent for several weeks. Alice says she will help him with a garage sale.***

***What is your next step?***
***Answer:*** Alice needs to leave the room so you can talk with Ferdi by himself.

***When Alice has gone, Ferdi is still a man of few words and appears psychomotor retarded. With encouragement, he tells you he feels overwhelmed by Alice's presence. He knows he needs her at the moment but finds her current perceived control over him intimidating. He feels he is depressed but 'no more than before', although you sense this is not true. He is slow to respond to your question about feeling suicidal but says he is not, and never has been.***

***What should you tell the patient?***
***Answer:*** You advise Ferdi to go back to hospital today for review as he is feeling so concerned about his condition. You discuss depression with him and advise him about how common it is after major illness, especially relating to the heart. You tell him you will request an urgent opinion about his antidepressants while he is at the hospital. He agrees to let Alice know about this and is happy for her to take him there, although he does not want her present at the hospital consultations.

***Ferdi talks to Alice and she takes him to hospital.***

***What should you do next?***
***Answer:*** You need to telephone the local hospital Ferdi attended and explain to the admitting officer that Ferdi has some persisting heart failure and you are concerned about his mental state. This is a good way of arranging a psychiatric consultation for Ferdi while he is at the hospital. It is wise to leave a message for the cardiologist involved in his care, explaining this.

***Outcome***
***Ferdi is admitted primarily to the cardiac ward and a psychiatric consultation is urgently arranged. He is commenced on frusemide for his oedema and a small dose of an ACE inhibitor. His bisoprolol is increased to 5 mg twice daily. As he has shown worsening psychomotor retardation, olanzapine 10 mg at night is added to augment the effects of his antidepressant venlafaxine, which is continued at the same dose. His ECG shows no QT prolongation on these medications.***

***He is then transferred to the psychiatric unit and kept in hospital for five weeks until he is considered psychiatrically stable enough to go home. During this time he makes the decision to break up with Alice.***

***Ferdi has improved significantly medically and psychiatrically when you see him after this second discharge, and is about to commence cardiac rehabilitation. He remains on the medications above at discharge and his ejection fraction has risen to 46%.*** **CT**

COMPETING INTERESTS: None.

## Key points

- **Always thoroughly examine patients who have been discharged from hospital after cardiac illness.**
- **Always consider the patient's circumstances and mental health after serious medical illness.**
- **Be alert to psychomotor retardation as a presentation of depression – patients with this often require hospitalisation.**
- **Be wary of decreasing a patient's antidepressants in a GP setting when the patient is already seriously depressed, and especially at a time of crisis.**
- **Always consider QT prolongation (with the associated increased risk of ventricular arrhythmias) in patients who are on multiple medications (especially when there is a cardiac and psychiatric history).**