

## Neutropenia associated with paroxetine

*Sir* – The lower limit of the normal neutrophil count is  $2.5 \times 10^9/L$  except in Afro-Caribbeans and people of Middle Eastern origin where  $1.5 \times 10^9/L$  is normal.<sup>1</sup> A number of psychotropic drugs including clozapine, chlorpromazine and thioridazine carry a risk of inducing neutropenia in patients whose white blood counts were previously within the normal range.

### Case report

Mrs E is a 38 year old Caucasian lady. She gave a six month history of low mood which was worse in the morning. Her concentration and energy levels were lower than normal. Her libido had decreased and she was unable to look forward to the future with any degree of optimism. She described her appetite and sleeping pattern as normal. The reason for her low mood she put down to the fact that the past three to four years she had been trying unsuccessfully to become pregnant. She felt guilty about this and said that she had let her husband down.

As her mood worsened she began to drink increasing amounts of alcohol but there was no withdrawal phenomena and gradually reduced the amount of alcohol she was consuming to about four units a day. When she had initially seen her family doctor, six months prior to psychiatric referral, he commenced her on paroxetine 20mg daily which was increased to 40mg daily.

Unfortunately on the higher dose of paroxetine she developed symptoms of hypomania and so her GP reduced the dose of paroxetine back to 20mg daily. Although she was somewhat better she still found life difficult to cope with. She also complained of night sweats and numbness in her hands and feet for the last six months.

She has positive family history of psychiatric disorders in that both her mother and older brother have been diagnosed as suffering from depression. Routine blood investigations were normal except for a white blood count (WBC) which was  $2.9 \times 10^9/L$  and neutrophils  $1.37 \times 10^9/L$ . Because of neutropenia paroxetine was discontinued and she kept free of all medications.

Three weeks later white blood cells was  $3.1 \times 10^9/L$  with neutrophils at  $1.55 \times 10^9/L$ . Six weeks later her white blood count was  $4.4 \times 10^9/L$  and neutrophils  $2.22 \times 10^9/L$ . Her general practitioner's records confirmed that all her blood investigations were normal prior to paroxetine prescription when she had seen him initially for her depression.

Paroxetine has been reported to be possibly associated with rapid emergence of severe neutropenia when prescribed to a patient who has been well maintained on clozapine with normal white cell count.<sup>2</sup> In our case report there is a possibility that paroxetine alone is causing neutropenia.

In conclusion, drug-induced neutropenia is a rare but potentially fatal reaction. It is not usually possible to predict which patients are susceptible and regular routine monitoring of the blood count is only indicated for a few drugs where the risk is known to be significantly higher. Although this case does not allow the conclusion that there is specific risk with paroxetine, we would advise on the need to bear this possibility in mind with patients who get infectious when on paroxetine and also to monitor care-

fully those patients to whom paroxetine is prescribed in addition to other drugs known to increase the risk of neutropenia.

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## The importance of isolated thrombocytopenia on routine blood screening in psychiatric patients

*Sir* – Routine blood screening is accepted practice in the investigation and management of psychiatric illness. We present two cases highlighting the importance of base-line blood investigations on admission and of monitoring for potential side-effects where routine full blood count (FBC) revealed isolated thrombocytopenia. We then go on to discuss the relevance of this finding to the management of these patients, in particular relating to the use of neuroleptic medication.

Our first case is a 38 year old man who has a long history of alcohol abuse. He was first admitted in a manic state which was treated with neuroleptic medication. At different times the following drugs were used: haloperidol sulphide, flupenthixol decanoate and thioridazine, with sedative drugs added at times.

This initial episode was followed by a depressive mood swing and a diagnosis of bipolar affective disorder was made. Blood investigations including a full blood count were relatively normal on admission. His platelet count at this time was  $130 \times 10^9/ml$ , which was just below the normal range of  $150-450 \times 10^9/ml$ . However, a repeat FBC two months later showed an isolated low platelet count of  $90 \times 10^9/ml$ .

We considered that long-standing abuse of alcohol can cause a reduction in platelet count but the lowest count occurred at a time when he was not abusing alcohol. Because of the change in platelet count upon commencement of treatment, neuroleptics were thought to be a possible cause. Neuroleptics were discontinued and treatment with lithium carbonate was successfully instituted. This platelet count remained low for six months after discontinuation of the neuroleptics. The patient remains well and takes lithium carbonate as monotherapy.

Our second case is a 22 year old man. He was initially admitted with a dysmorphophobia syndrome. He experienced psychotic symptoms including hallucinations and had a depressed mood. Routine blood investigations on admission revealed an isolated thrombocytopenia of  $56 \times 10^9/\text{ml}$ . He had no history of major medical illness and had not had any blood investigations before this admission. Physical examination was normal.

Further investigation of this thrombocytopenia was hampered by his refusal to have a bone marrow examination carried out. He was reviewed by a haematologist and a putative diagnosis of idiopathic thrombocytopenia was made. Treatment of his psychotic illness has required the use of neuroleptic medication. His psychotic symptoms have resolved after a period of treatment with the anti-psychotic sulpiride.

#### Discussion

Abnormalities in platelet function and count are described in many systemic illnesses and in conjunction with the ingestion of many substances including various medications.<sup>1</sup>

Thrombocytopenia secondary to neuroleptic treatment is rare.<sup>2,4</sup> Low normal platelet counts are more common.<sup>4</sup> Our review of the literature revealed single case studies and small study groups which have documented thrombocytopenia with the use of aliphatic and piperidine phenothiazines,<sup>2</sup> butryphenones,<sup>2</sup> risperidone<sup>5</sup> and clozapine.<sup>6</sup> Thrombocytopenia may be an isolated finding,<sup>2</sup> or part of the neuroleptic malignant syndrome with disseminated intravascular coagulopathy.<sup>6</sup> It may be associated with more pervasive bone marrow suppression, caused by another disease process, or related to alcohol abuse or malnutrition.<sup>6</sup> Investigation can be difficult.

Diagnosis is made clinically after a process of exclusion. When the diagnosis of neuroleptic induced thrombocytopenia is made and neuroleptics are discontinued the platelet count can take up to six months to return to normal.<sup>7,8</sup> After the diagnosis has been made and in the context of unrelenting psychotic symptoms, the management can include changing the class of anti-psychotic drug,<sup>2</sup> replacement with an atypical anti-psychotic,<sup>9</sup> or discontinuation of all neuroleptic medication.<sup>10</sup>

In our first case we were able to successfully change from a neuroleptic to lithium carbonate. In this case further treatment with neuroleptics in the context of a psychotic relapse remains a real possibility. In the case of our second patient the cause of the thrombocytopenia was felt to be idiopathic. However this could not be confirmed as the patient refused to consent for a bone-marrow investigation. The ongoing management of his psychotic illness with neuroleptics requires frequent monitoring of his platelet count.

#### Conclusion

The discovery of isolated thrombocytopenia in psychi-

atric patients requires further investigation. This includes systematic review of clinical information and haematological parameters. There may be need to refer the patient for assessment to a specialist haematological medical service who can advise on investigation and issues relating to management of the condition. Careful monitoring of such patients is essential. This will include regular thrombocyte counts if neuroleptic medication continues to be prescribed.

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