Antidepressants: Benefit of SNRI is proven

August 25 2009

The Institute for Quality and Efficiency in Health Care (IQWiG) was commissioned by the Federal Joint Committee (G-BA) to investigate whether patients with depression benefit from taking drugs belonging to the selective serotonin and norepinephrine reuptake inhibitor (SNRI) drug class. Up till now, 2 of these drugs have been approved as antidepressants in Germany: venlafaxine and duloxetine. The Institute published its final report on 18 August. According to this report, the benefit of both drugs has been proven compared to a sham drug (placebo): patients respond better to the therapy and suffer less from the symptoms of depression. Moreover, there are indications that both drugs protect against relapse in addition to alleviating symptoms.

Interplay of biological and psycho-social factors

There are various assumptions about when and how depression occurs. The possible causes and influencing factors are manifold. What is not disputed is that the complete clinical picture of depression is the result of a complex interplay of biological and psycho-social factors. There are indications that a modification or reduction in the transfer of certain messenger substances in the central nervous system plays a part. This is where most drug therapies start their effect. The comparatively new SNRI drug class is intended to influence two of these messenger substances (neurotransmitters) by inhibiting the reuptake of serotonin and norepinephrine.

Manufacturers provide unpublished data

IQWiG and its external experts found a total of 80 clinical trials that could be included in the assessment. Sixteen compared duloxetine (manufacturer: Lilly) with a sham drug or another antidepressant, 62 tested venlafaxine (manufacturer: Wyeth) in the same way, 2 trials compared the 2 drugs directly with each other. The manufacturers of both the drugs investigated (Lilly and Wyeth) provided a great deal of unpublished data.

In these trials, the effect of the drugs is mostly measured on scales that patients and/or health practitioners can use to document changes in symptoms. IQWiG's benefit assessment included outcomes such as the change in depressive symptoms and accompanying symptoms such as anxiety, pain or sleep disorders, as well as mortality, suicidal tendency, quality of life, daily routine (social functioning level) and adverse drug effects.

Patients respond better to both drugs than to placebo

IQWiG and its external experts came to the conclusion that in acute therapy patients respond better to both drugs than to a sham drug. There is greater alleviation of symptoms, and in some cases they recede to such an extent that some patients no longer fulfil the criteria for a depression diagnosis. As far as relapse prevention is concerned, there is at least an indication that patients benefit more from duloxetine and venlafaxine than from a sham drug. In contrast to duloxetine, there is also proof in the case of venlafaxine that the drug provides more effective protection than placebo against a renewed occurrence of depressive symptoms (recurrence prevention). In the direct comparison of venlafaxine and duloxetine, neither drug displays superiority over the other with regard to alleviating depressive symptoms.

With reference to the health-related quality of life, an advantage was proven for duloxetine in the comparison with placebo, but not for

venlafaxine. However, if the drugs are compared directly, there is no relevant difference. In the comparison with a sham drug, both drugs also improve the patient's ability to manage their daily routine (social functioning level).

Venlafaxine has limited additional benefit compared to other antidepressants

In the comparison with another antidepressant drug class, selective serotonin reuptake inhibitors (SSRI), venlafaxine displays an advantage: it alleviates depressive symptoms better than the comparator drugs. However, the same does not apply to duloxetine.

Differences are visible in side effects

The investigation into adverse drug effects revealed that venlafaxine is superior to duloxetine in the direct comparison, as fewer patients discontinued therapy due to side effects. In this context, however, both drugs are inferior to SSRI.

Little influence on accompanying symptoms of depression

With regard to accompanying symptoms of depression, such as anxiety, pain or sleep disorders, there is only one relevant difference revealed in the included trials: In the venlafaxine group, patients suffered less from anxiety conditions than in the placebo group. However, no relevant effect could be established for either of the two drugs with regard to the other accompanying symptoms investigated. This applies both to the comparison with a sham drug and the comparison with other antidepressants.

Source: Institute for Quality and Efficiency in Health Care