

## Case Report

# Impact of brand-name drug worship and expectation psychology on antidepressant efficacy

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**Abstract:** The choice of the generic drug is reasonable if there is evidence for its therapeutic equivalence with the brand-name drug. However, the reduced effectiveness of switching from brand-name drug to generic drug is not rare. The impact of brand-name worship and expectation psychology on drug efficacy is noteworthy to report. A 45-year-old woman suffered from depression mood disorder. She experienced profound improvement in her depressive symptoms after a switch from domestic generic venlafaxine to imported brand-name counterpart. The interview showed that the woman has a strong brand-name drug worship and expectation psychology, which is representative, typical and popular in China especially in vast rural areas. Medication education does not work too much. The brand-name drug worship and expectation psychology might improve drug efficacy when patient is switched from generic drug to branded medication.

**Keywords:** Antidepressant, brand-name, difference, generic, psychology

### Introduction

The choice of the generic drug is reasonable if there is evidence for its therapeutic equivalence with the brand-name drug. However, the seeming economy in choosing generic medication leads to the decrease of clinical effectiveness, to prolong the treatment time, and to increase the treatment cost as well [1]. The reduced effectiveness of switching from brand-name drug to generic counterpart is not rare. The generic substitution sometimes fails to produce the same drug efficacy as the brand-name drug. Many factors such as pharmacokinetics difference might attribute to the efficacy difference between the generic and brand-name drug. Here we report a clinical case about the decreased effectiveness after switching from a brand-name to generic antidepressant in respect of psychology factors.

### Case report

A 45-year-old woman, a rural teacher, experienced her first depressive episode approximately 2 years ago due to work pressure and family problems. She then reported depressed

mood, fatigue, anxiety, loss of memory, insomnia, and irritability. Her family member said that she could not recall the past affairs even her mother's name. During the first diagnosis of psychiatric interview, she was conscious and rigid, refused to be checked and denied sickness, without any hallucination and delusion. First diagnosis was neurosis and she was started on estazolam 1 mg/d for 30 days and diazepam 10 mg iv for 3 days by her general physician. The initial treatment achieved partial remission of her symptoms. Both estazolam and diazepam was both domestic generic drug.

One year later she visited the outpatient unit of the Psychiatry Department of our center due to a major negative life event (divorce). She complained progressive mental decline and suicidal thought for 6 months. She was treated with EffexorXR (venlafaxine, imported brand-name drug, of Pfizer Inv, USA) 75 mg/d for her depression. After her medication for 3 months, the Hamilton Depression (HAMD) score was reduced from 30 to 21, and she felt better than before. Considering the economy, her family member required her treatment with Blossom (venlafaxine, domestic generic drug, of Kang-

hong Pharm, China) instead of EffexorXR. Medication with Blossom for 3 months later, however, the HAMD score did not reduce (from 21 to 22). The symptom seemed getting worse and the suicidal thought came to her again. In order to control her symptom, EffexorXR was prescribed for her for second time. 3 months later her HAMD score was reduced significantly to 5. The vital signs including blood pressure, heart rate, respiratory rate and body temperature was normal. Blood routine, liver and renal function tests as well as cardiac enzymes were normal. Her condition was stable.

In latest interview, the patient said like that “though I took Blossom every day meekly, I do not want to take it from the bottom of my heart”, “You get what you pay for”. She strongly doubted about generic drugs for many times during the interview. She believed that the quality of imported brand-name drugs was unquestionable and had great expectation of the efficacy of EffexorXR. As clinical pharmacist tried to educate her with the therapeutic equivalence information of Blossom and EffexorXR, the patients refused to receive the knowledge.

The patient was healthy with no history of traumatic brain injury and drug allergy.

Up to the time of this paper writing, the patient kept EffexorXR medication.

### Discussion

Generic medications are common in most countries, especially in developing China. Although many documents revealed that no significant differences for efficacy and safety between domestic generic drugs to imported brand-name counterparts [2-4], many patients yet seem to view generic drug with doubt, believing them to be of inferior quality and not as safe and effective as the brand-name counterpart [5-7]. In this case report the patient did not acknowledge Blossom, although Blossom is pharmacokinetic and therapeutic equivalent to EffexorXR [8, 9].

Medication psychology including brand-name worship and expectation is a significant influencing factor on drug efficacy. Brand is a demonstrated part of the placebo response. Branding is so entrenched in our clinical practice that drugs are most frequently referred to

by their brand name even when generic versions are available [10]. Included in branding is the marketing surrounding a product, of which price is a component. Placebo effects are especially stronger when the medication is believed to be more expensive [11]. This can explain that why most Chinese patients prefer to choose it as long as they can afford, because the imported brand-name drug is usually more expensive than domestic generic counterpart in China, and because they believe “you get what you pay for” [5].

There are some evidence that regular users of a brand-name analgesic tablet report greater headache relief than regular users of other generic drugs in spite of the same medication formulation [12]. Medication switch, particularly to generic drug, seems to be associated with reduced subjective and objective measures of medication effectiveness and increased side effects [13]. Seven patients, whose condition had been well stabilized with brand-name clozapine, experienced a rapid and profound deterioration after the switch to the generic formulation [14].

### Conclusion

Given these results, we might conclude that the brand-name drug worship and expectation psychology might improve drug efficacy when patient is switched from generic drug to branded medication. It is important for clinicians to use the impact in patients to effectively enhance the drug efficacy. Generics do not always lead to anticipated monetary savings and sometimes may raise compliance issues [15].

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### Disclosure of conflict of interest

The authors report no conflicts of interest in this work.

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