Impaired emotional facial expression recognition in alcoholism compared with obsessive-compulsive disorder and normal controls

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Abstract

Emotional facial expression (EFE) decoding skills have been shown to be impaired in recovering alcoholics (RA). The aim of the present study is to replicate these results and to explore whether these abnormalities are specific to alcoholism using two control groups: non-patient controls (NC) and patients with obsessive-compulsive disorder (OC). Twenty-two alcoholic patients at the end of their detoxification process (RA) were compared to 22 OC and 22 NC matched for age, sex and education level. They were presented with 12 photographs of facial expressions portraying different emotions: happiness; anger; and fear. Each emotion was displayed with mild (30%) and moderate (70%) intensity levels. Each EFE was judged on 8 scales labeled happiness, sadness, fear, anger, disgust, surprise, shame and contempt. For each scale, subjects rated the estimated intensity level. RA were less accurate in EFE decoding than OC and NC, particularly for anger and happiness expressions. RA overestimated the emotional intensity for mild intensity level expressions compared with both OC and NC while no significant differences emerged for moderate intensity level expressions. Deficits in EFE decoding skills seem to be specific to RA when compared with OC. Comparison with other psychopathological groups is still needed. Possible consequences of EFE decoding deficits in RA include distorted interpersonal relationships. © 2001 Elsevier Science Ireland Ltd. All rights reserved.

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1. Introduction

Emotional facial expression (EFE) recognition has been shown to be severely impaired in recovering alcoholics (RA) (Philippot et al., 1999). RA made significantly more errors in identifying the emotion displayed by a face than non-patient controls, with a special bias toward overattribution of anger and contempt. RA also systematically overestimated the intensity of the emotions portrayed by the faces. Moreover, RA did not perceive this decoding deficit. These impairments seemed to remit only partially with abstinence (Kornreich et al., in press), as decoding biases for anger and disgust were present in mid- to long-term abstinent patients while intensity overestimation disappeared. Clinical implications of EFE recognition deficit could involve interpersonal relationship impairments since the decoding of non-verbal cues constitutes an essential process in normal communication and interaction regulation (Patterson, 1999).

The aim of the present study is to confirm our previous findings in RA and to explore if the observed decoding EFE pattern is specific to this population. Indeed, a major methodological consideration in alcoholism research involves the ability to show that an observed effect is specific to alcoholism. To demonstrate such specificity, alcoholics must differ on the studied dimension from control groups with other behavior problems as well as from 'non-patient' control groups (Sher et al., 1999). At this stage, two non-alcoholic control groups were therefore included in the present study, one with psychopathology, namely obsessive-compulsive disorder (OCD), and one with no psychopathology.

We chose an OCD control group because alcoholism and OCD display symptomatic similarities but do not share common etiologies. In particular, several investigators have noted similarities between urges and desires to abuse alcohol and OCD. Researchers in the field of alcoholism have characterized alcohol abusers as having a 'compulsion' to use alcohol (Edwards and Gross, 1976; Caetano, 1985; Modell et al., 1992; Roberts et al., 1999). It has also been suggested that the craving for alcohol seen in alcohol abusers resembles obsessive thought patterns (Modell et al., 1992; Anton et al., 1995). However, the life-time risk for OCD among close relatives of alcoholics is 1.4%, which does not support the existence of a common genotype for the two disorders (Schuckit et al., 1995). Therefore, OCD appears relevant as a psychopathological control group.

2. Method

2.1. Participants

Twenty-two inpatients (9 men and 13 women), diagnosed with alcohol dependence according to DSM IV criteria (American Psychiatric Association, 1994) were recruited in the psychiatric ward of a large University Hospital in Brussels, Belgium, at the end of their detoxification process. They were in their third week of an in-patient stay and, hence, abstinent for 2−3 weeks. They were not receiving any psychotropic medication at the time of assessment.

Twenty-two outpatients suffering from OCD according to DSM IV were recruited in the same hospital through the out-patient department and matched with the RA patients for age, sex and education level. Education categories were coded as follows: 1 = post-secondary school training; 2 = completion of secondary school or equivalent; and 3 = completion of the 3 first years of secondary school or equivalent. All the OCD patients were being treated with selective serotonin reuptake inhibitors.

The non-patient control group consisted of 22 age, sex and education level matched volunteers with no psychiatric record.

Informed consent for participation in the study was obtained from each participant.

The Zung Anxiety Scale (Zung, 1971) and the Zung Depression Scale (Zung, 1965) were used to control the possible effect of anxiety and depression variables on the decoding of EFE. Alcoholic patients and controls did not display any obsessive-compulsive symptoms. The Yale−Brown Obsessive-Compulsive Scale (Goodman et al., 1989a,b) was administered to OCD patients,