

Research article Ερευνητική εργασία

Alexithymia, depression and serum lipids in suicide attempters

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Over the last decade several studies have discussed the association between serum cholesterol, depressive disorders and suicide. A specific psychological variable related to affect is alexithymia. Alexithymia has been linked to depression and suicidal behaviour. Concerning lipid levels there are several studies that suggest changes in serum lipid composition maybe related to depression and suicidal behaviour. In this study we examined the possible relationship between alexithymia, depression and serum lipids in suicide attempters. We studied 50 non-violent suicide attempters (drug overdosers) with a mean age of 35.0 (± 12.2) years. Alexithymia was measured using the Shalling-Sifneos Personality Scale Revised (SSPS-R) and depression using the Montgomery-Asberg Depression Rating Scale (MADRS). Serum lipids concentrations were determined by enzymatic method within 24h of hospital admission. For the statistical evaluation Spearman's rank correlation coefficients were used. The mean serum lipid levels were: total serum cholesterol (TC) 175.2 (± 29.6) mg/dL, high-density lipoprotein cholesterol (H-DLC) 47.08 (± 13.1) mg/dL, low density lipoprotein cholesterol (L-DLC) 109.5 (± 23.5) mg/dL and the mean serum triglycerides (TR) level was 89.4 (± 39.1) mg/dL. The mean scores on the questionnaires were: SSPS-R 10.3 (± 3.7), MADRS 33.5 (± 5.9). There were significant correlations between: (a) SSPS-R score and MADRS score ($r=0.439$, $p<0.001$), (b) SSPS-R score and TR level ($r=0.323$, $p<0.05$). There were no significant correlations between MADRS score and any of the lipid fractions measured. To our knowledge, only few studies have examined the association between alexithymia and clinical-psychopathological parameters in suicide attempters. There are no previous studies comparing serum lipid profile with alexithymia in suicide attempters. This is the first study to compare at the same time serum lipids, alexithymia and depression in suicide attempters. The results suggest that although there was a strong relationship between alexithymia and depression in suicide attempters only alexithymia was correlated to Serum triglyceride levels.

Key words: Alexithymia, depression, serum lipids, suicide attempt, drug overdose.

Introduction

The term "alexithymia" was introduced in 1972 by Peter Sifneos.¹ It has originated from the Greek words a=lack, lexis=word, and thymos=feeling. Alexithymia (AL) is considered to be a difficulty in the awareness of one's feelings and/or a difficulty of finding words to describe one's own feelings.^{2,3} Subjects with alexithymia fail to express their feelings, avoid interpersonal conflicts and display more negative affects. Alexithymia is not unique to depression, but is seen in about to 45% of patients with depression. Its presence in major depression has also been linked to severity of depression and suicide risk.⁴⁻⁶ Some studies have suggested an association of low cholesterol levels with increased morbidity of depression and/or suicidal behaviour.⁷⁻⁹ However, recent research findings are inconsistent, thus, increases, decreases or no change in serum lipid levels have been reported in patients with depression and/or suicide attempts.^{10,11} The aim of this study is to examine possible relationships between alexithymia, depression and serum lipids in a group of non-violent suicide attempters.

Material and method

Fifty suicide attempters by drug overdose (non-violent way) consecutively admitted to Pathology Department, Red Cross General Hospital, Athens were included in the study. There were 68% women and 32% men with a mean age of 35.0 (± 12.2) years. All attempters provided informed consent after receiving a full explanation of the study. Information regarding demographic data, past psychiatric and medical history, medication used, alcohol intake, intoxication at the time of suicide attempt, body weight and height as well as history of suicide attempts were collected using a semi-structured interview schedule. Attempters less than 18-years old or more 59-years old, subjects with current infection or serious medical illness, female attempters on contraceptives, patients with eating disorders or drug abuse were excluded. Subjects were free of drugs known to affect lipid levels. All subjects had normal blood tests including haematological, renal, liver and thyroid function tests. Blood sample was drawn by venipuncture the day after the suicide attempt at 8 a.m. Serum lipid con-

centrations were determined by enzymatic methods. All attempters were assessed concomitantly using the Schalling-Sifneos Personality Scale Revised (SSPS-R)¹² and the Montgomery-Asberg Depression Rating Scale (MADRS)¹³ by the same psychiatrist-rater. Data were analyzed using the SPSS software for windows (version 8.0). For the statistical evaluation Spearman's rank correlation coefficients were used.

Results

The mean total serum cholesterol (TC) level of the attempters was 175.2 (± 29.6) mg/dL, the mean high-density lipoprotein cholesterol (H-DLC) level was 47.08 (± 13.1) mg/dL, the mean low density lipoprotein cholesterol (L-DLC) level was 109.5 (± 23.5) mg/dL and the mean serum triglycerides (TR) level was 89.4 (± 39.1) mg/dL. The mean SSPS-R score was 10.3 (± 3.7) and the mean MADRS score was 33.5 (± 5.9). We found significant correlations between SSPS-R score and MADRS score ($r=0.439$, $p<0.001$) as well as between SSPS-R score and TR level ($r=0.323$, $p<0.05$). There were no significant correlations between MADRS score and any of the lipid fractions measured (table 1).

Discussion

During the past decades several epidemiological studies have described an association between lower cholesterol concentrations and increased suicide risk.^{14,15} However, recent clinical studies concerning cholesterol levels in depressed patients with or without suicidal behaviour had contradictory results,^{7-11,16,17} To our knowledge, there are few studies on the association between AL and clinical-psychopathological parameters in suicide attempters¹⁸⁻²⁰ and there are no

Table 1. Intercorrelations between SSPS-R score, MADRS score and serum lipid levels

	MADRS	TC	H-DLC	L-DLC	TR
SSPS-R	$r=0.439$ $p<0.001$	$r=0.195$ NS	$r=0.096$ NS	$r=0.275$ NS	$r=0.323$ $p<0.05$
MADRS		$r=0.192$ NS	$r=0.076$ NS	$r=0.226$ NS	$r=0.067$ NS

SSPS-R=Shalling-Sifneos Personality Scale-Revised, MADRS=Montgomery-Asberg Depression Rating Scale TC=Total Cholesterol, H-DLC=High-Density Lipoprotein Cholesterol, L-DLC=Low-Density Lipoprotein Cholesterol, TR=Triglycerides

studies comparing serum lipid profiles with AL in suicide attempters. This the first study to compare at the same time serum lipids, AL and depression in suicide attempters.

Several limitations of this preliminary study are worth noting: (a) Serum lipids were measured after attempted suicide and not before it; thus we were unable to control several conditions that may have affected serum lipid levels (b) Although subjects on drugs known to affect lipid levels were excluded, the absence of a washout period of psychotropic drugs should be taken into account (c) The relatively small sample of attempters by non-violent ways, limits the generalizability of our results in the whole group of suicide attempters.

The first finding of this study is the strong relationship detected between AL and depression in suicide attempters. This result is consisted with a previous study²⁰ and reinforces the hypothesis that subjects with AL are more prone to both depression and sui-

cidality.⁴ The second finding was that although there were no significant correlations between depression and serum lipids, there was an association between alexithymia and serum TR. Several mechanisms have been suggested to describe the potential effect of lipids metabolism on depression and/or suicidal behaviour. Perttinen²¹ has suggested that lipid concentration and suicidal behaviour are possibly connected with interleukin-2, a cytokine produced by T cells that causes an increase in serum TR levels. Martin and Pihl²² proposed the "stress-alexithymia" hypothesis in which patients with alexithymia may be suffering from chronic stress that, can promote increases in inflammatory factors such as interleukins and C-reactive protein.²³ According to Finset et al²⁴ alexithymia is related to high cortisol levels, which also, may increase the release of interleukins. Further studies are necessary to elucidate the relationship between alexithymia, depression and suicidality and the biological mechanisms involved in these conditions.

Αλεξιθυμία, κατάθλιψη και επίπεδα λιπιδίων ορού σε αποπειραθέντες αυτοκτονία

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Κατά τη διάρκεια της τελευταίας δεκαετίας αρκετές μελέτες έχουν διερευνήσει τη σχέση μεταξύ χοληστερόλης, κατάθλιψης και αυτοκτονίας. Ανάμεσα στις ειδικές ψυχολογικές παραμέτρους που σχετίζονται με το θυμικό είναι και η αλεξιθυμία. Η αλεξιθυμία έχει συσχετισθεί τόσο με την κατάθλιψη όσο και με την αυτοκτονική συμπεριφορά. Επίσης, αρκετές μελέτες υποστηρίζουν τη συσχέτιση ανάμεσα στα επίπεδα λιπιδίων ορού, την κατάθλιψη και την αυτοκτονική συμπεριφορά. Στη μελέτη αυτή εξετάσαμε την πιθανή συσχέτιση μεταξύ αλεξιθυμίας, κατάθλιψης και επιπέδου λιπιδίων σε αποπειραθέντες αυτοκτονία. Στη μελέτη συμπεριελήφθησαν 50 αποπειραθέντες αυτοκτονία με μη βίαιο τρόπο (υπέρβαση δοσολογίας φαρμάκων) με μέση ηλικία 35±12,2 ετών. Η αλεξιθυμία εκτιμήθηκε με τη χρήση της Αναθεωρημένης Κλίμακας Προσωπικότητας των Shalling-Sifneos (ΑΚΠΣΣ), και η κατάθλιψη, με την Κλίμακα Κατάθλιψης Montgomery-Asberg (ΚΚΜΑ). Τα επίπεδα λιπιδίων στον ορό προσδιορίστηκαν με ενζυματική μέθοδο μέσα σε 24 ώρες από την εισαγωγή των αποπειραθέντων αυτοκτονία στο νοσοκομείο. Η στατιστική ανάλυση έγινε με το στατιστικό πακέτο SPSS (έκδο-

ση 8,0), και χρησιμοποιήθηκε ο συντελεστής συσχέτισης του Spearman. Η μέση τιμή χοληστερόλης ορού (ΟΧ) των αποπειραθέντων ήταν 175,2 ($\pm 29,6$) mg/dL, η μέση τιμή της υψηλής πυκνότητας χοληστερόλης (ΥΠΧ) ήταν 47,08 ($\pm 13,1$) mg/dL, η μέση τιμή της χαμηλής πυκνότητας χοληστερόλης (ΧΠΧ) ήταν 109,5 ($\pm 23,5$) mg/dL και η μέση τιμή των τριγλυκεριδίων ορού (ΤΡ) ήταν 89,4 ($\pm 39,1$) mg/dL. Η μέση τιμή της ΑΚΠΣΣ ήταν ($\pm 3,7$) και η μέση τιμή της ΚΚΜΑ ήταν 33,5 ($\pm 5,9$). Βρέθηκαν σημαντικές συσχετίσεις ανάμεσα στην ΑΚΠΣΣ και την ΚΚΜΑ ($r=0,439$, $p<0,001$) όπως επίσης ανάμεσα στην ΑΚΠΣΣ και στα επίπεδα των ΤΡ ($r=0,323$, $p<0,05$). Δεν ανευρέθησαν σημαντικές συσχετίσεις ανάμεσα στην ΚΚΜΑ και στα επίπεδα των λιπιδίων ορού. Ελάχιστες μελέτες έχουν διερευνήσει τη συσχέτιση μεταξύ αλεξιθυμίας και άλλων κλινικών-ψυχοπαθολογικών παραμέτρων στους αποπειραθέντες αυτοκτονία. Δεν υπάρχουν προηγούμενες μελέτες που να διερευνούν τη σχέση ανάμεσα στα λιπίδια ορού και την αλεξιθυμία σε αποπειραθέντες αυτοκτονία. Η μελέτη αυτή είναι η πρώτη που διερευνά ταυτόχρονα τη σχέση ανάμεσα στα επίπεδα λιπιδίων ορού, την αλεξιθυμία και την κατάθλιψη σε αποπειραθέντες αυτοκτονία. Τα αποτελέσματα της μελέτης δείχνουν ότι αν και υπήρξε σημαντική συσχέτιση μεταξύ αλεξιθυμίας και κατάθλιψης στους αποπειραθέντες αυτοκτονία, μόνο η αλεξιθυμία συσχετίστηκε με τα επίπεδα τριγλυκεριδίων ορού.

Λέξεις ευρετηρίου: Αλεξιθυμία, κατάθλιψη, λιπίδια ορού, απόπειρα αυτοκτονίας, υπέρβαση δοσολογίας φαρμάκων.

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