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Evaluation of anxiety and depression in childhood migraine

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Abstract. – Childhood migraine can be the expression of an inconscious attempt of the small patient to show a discomfort which is denied through the defence of somatization. We considered a sample of 73 children, 39 males and 34 females suffering from migraine. We evaluated the presence of emotional disorders through diagnostic interviews consisting of one by one submission of the Anxiety Scale Questionnaire for Evolutive Age and the Children Depression Scale Test. Within our sample we are able to distinguish three groups: a first group negative for both anxiety and depressive disorders, thus defined as control group; a second group presenting anxiety depressive disorders and a third one presenting a mostly depressive symptomatology. We found a significantly higher incidence of migraine in male first-born children belonging to the group with a condition associated to anxiety and depression.

Key Words:

Anxiety and migraine, Depression and migraine.

Introduction

Migraine is an important and frequent symptom in childhood. In fact, approximately 20% of school age population suffers from this ailment several times during the year[1-2]. Generally cephalea presents as migraine crises or tension headaches, although in children this distinction is much less neat than in adults. In 1937, Wolff et al.[3] drew up a psycological profile of patients affected by migraine describing them as anxious, ambitious, tidy, rigid, and hypercontrolled often showing repeated actions and indecisions due to their fear of being criticized. The hostility feeling of this subjects was sometimes directed against the others but more often it turned against themselves. Recently, Cox et al.[4] postulated the existence of a common biological terrain between migraine and depression. Depression, in fact, is often a component of the chronic headache clinical picture both as a triggering factor and a consequence of migraine. Aim of our paper is to investigate the relationship between emotional disorders, such as anxiety and depression and migraine in evolutive age. Moreover, we examinated the clinical expression of such pathologies in pediatric age, since the symptoms are different from those of adults and are influenced by age and development.

Materials and Methods

We studied 73 children suffering from migraine, diagnosed according to the criteria of the Headache Classification Committee of the International Headache Society[5]. They were 39 males and 34 females, age range 8-14 years, mean age 11.2 years. Of these, 69.9% presented an associated secondary migraine and 30.1% a tension headache. The mean age at the onset of migraine was 6.9 years; the frequence was 5-8 times monthly and the intensity of the migraine was moderate. In all subjects, family history was negative for psychiatric patologies. None of these children presented a neurological picture positive for lesions of the CNS. Furthermore, to rule out a possible organic cause of migraine, the whole sample was submitted to routine blood and chemical tests as well as instrumental tests (EEG, X-rays of the skull, visual examination) which resulted within the nor-

mal ranges. To evaluated the possible presence of emotional disorders, all the patients were submitted to the Anxiety Scale Questionnarie for Evolutive Age[6] and to the Children Depression Scale[7] According to the Sample Classification[8], after the examination of the questionnaires we were able to subdivide our patients in three groups: a first group (A) negative for both anxiety and depressive disorders (24.6%); a second group (B) presenting anxiety-depressive disorders (21.9%), and a third one (C) presenting depressive symptomatology (53.4%). There was no relevant differences between the groups as concerns type of cephalalgia and presence of a family history positive for psychiatric disorders. The incidence of the cephalalgic symptom was greater in first-born children which represent the 60.3% of our sample. Moreover, 87.5% of cephalalgic subjects belonging to the AD group were firstborn children.

Results

There were no relevant differences between the groups, as concerns the type of cephalalgia and the presence of a family history positive for psychiatric disorders. The incidence of migraine was higher in males than in females (male female ratio 7:1) and was greater in first-born children (which represent the 60.3% of our population studied). On the basis of the symptoms, the prevalence of migraine was significantly higher among the patients of the group B compared to the other two groups ($p < 0.05$). Moreover, we observed that 87.5% of the subjects of group B were first-born male children. As far as concerns the intensity of migraine crises, we detected a statistically significant difference between the group A and all emotionally disordered children ($p < 0.02$), expecially between group A and group B ($p < 0.01$), indicating in the latter a major incidence of medium-serious crises. Among the cephalalgic risk factors observed (familial trait, cyclic vomiting, kinetosis, sleep disorders, vertigo and recurrent abdominal pain, hyperactivity) only sleep disorders and hyperactivity resulted significantly more frequent in anxious and depressed children.

Discussion

In evolutive age the correlations between psychological features, psychosomatic disorders, illnesses and migraine have been widely studied. Couch et al.[9] observed various degrees of irritability, emotional instability and immaturity in a significant percentage of children suffering from migraine; Prensky et al.[10] detected depressive symptoms, hyperactivity, compulsive traits and recurring anxiety symptoms in cephalalgic children. Other Authors[11] stress a lesser social participation, a greater incidence of somatic disorders,a minor success at school and major anxiety compared to healthy children. Kaiser et al.[12] indicates the significant presence of high levels of shyness, sensitivity and behavioural alterations in cephalalgic children. Some Authors[13] report an 86% incidence of depression in adolescents suffering from chronic headache whilst others focus their attention on the higher suicide risk rate among adolescents suffering from migraine. Thus, it appears evident that anxiety and depression are the emotional disorders more frequently associated to migraine. Anxious children live always with a vague feeling of fear, as if something terrible were about to happen. They tend to be extremely conscientious and worry about near events, such as oral tests at school, the likelyhood of getting hurt or having to meet a new same-age group. These subjects may aim at perfection and be excessively conformist, looking for adults' approval. In younger children the use of body language to express discomfort is frequent. Abdominal pain, nausea, visual alterations and in older subjects cardiovascular disorders and weakness may be the hallmarks of the condition. As far as concerns depression the clinical symptomatology is different from children than adults. A child, in fact, may express feelings of humiliation, shame, desperation, loss, blame, inadequacy, sadness without showing an evident symptomatology peculiar to depression. Childhood depression can find its expression also in various behavioural disorders through an emotional lability, crises of fury and aggression, a rapid alternance of anxiety and sadness, flight and attack, periods of marked inactivity and passivity and an evident tendency to play the fool when faced with all conflicting and embarassing situations. On the basis of the results of

our survey we are able to draw up the profile of a child with a likely psychogenous migraine. In other words, when we are faced with a child complaining of headache and presenting the following characteristics: first-born male prevailing, among his cephalalgic risk factors, are hyperactivity and sleep disorders, suffering from frequent crises of medium-serious intensity, and many epiphenomena, we must always wonder whether, through the migraine symptom, the child wants to comunicate his feeling of psychological discomfort that we must understand and try to solve for him.

References

1) BILLE B. Migraine in Childhood. Acta Pediatric Scand 1962; 51: 1.
2) SILLAMPAA M. Prevalence of migraine and other headache in Finnish children starting school. Headache 1976; 15: 288-290.
3) WOLF et al. Headache and other pain. Ed. 1: London Oxford University Press 1937.
4) COX D et al. Relationship between headache and depression. Headache 1981; 21: 261-263.
5) INTERNATIONAL HEADACHE SOCIETY: CLASSIFICATION AND DIAGNOSTIC CRITERIA FOR HEADACHE DISORDERS, CRANIAL NEURALGIAS AND FACIAL PAI. Cephalalgia 1988; VIII (Suppl. 7).
6) BUSNELLI C, DALL'AGLIO E, Faina P. Questionario Scala d'Ansia per Età Evolutive, Manuale di istruzioni. Organizzazioni Speciali Firenze.
7) TISHER M, LANG M. The Children DepressionScale: review and further developments. Cantwell D.P. e Carlson G. A. (Eds). Childhood Depression. New York: Spectrum; 1984.
8) CAMUFFO M. Le scale di valutazione della depressione in età evolutiva. Aggiornamento professionale. Psichiatria dell'infanzia e dell'adolescenza 1985; 52:219-230.
9) COUCH et al. Evolution of relationship between migraine headahe and depression. Headahe 1979; 15: 141-150.
10) PRENSKY et al. Migraine and migranins variants in pediatric patients. Pediatric clinics of north America 1976; 23: 461-471.
11) CUNNINGHAM SS, MC GRATH PS. Personality and behavioural characteristics in pediatric migraine. Headache 1988; 28: 16-20.
12) KAISER L et al. Depression in adolescent headache patients. Headache 1992; 3: 74-79.
13) LING W, OFTEDAL G, WEINBERG W. Depressive illness in childhood presenting a severe headache. Arn J Dis Child 1970; 120: 122-124.