

TREATMENT OF A PATIENT WITH A DIAGNOSIS OF HHT WITH A COMBINED PSYCHOLOGICAL AND PHYSICAL APPROACH

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INTRODUCTION

Hereditary Hemorrhagic Telangiectasia (HHT), or Osler-Weber-Rendu syndrome, is a rare inherited disease (frequency of 1 per 5,000 to 10,000 individuals) that causes abnormal blood vessel formation, and is characterized by recurrent spontaneous epistaxis and presence of multiple arteriovenous malformations (AVMs) in the liver, gastrointestinal tract, lung or brain (McDonald et al. 2011).

CASE DESCRIPTION

Here, we report the case of a 39-year-old woman with a genetic and clinical diagnosis of HHT (Curacao criteria: epistaxis, mucocutaneous telangiectasias, positive family history). Because of recurrent spontaneous severe epistaxis, she had been suffering from chronic iron deficiency anemia requiring both oral and intravenous iron replacement therapy and frequent blood transfusions. From September 2017 to June 2019, she received transfusion of 4 units of red blood cells and 6 infusions of ferric carboxymaltose, reaching a mean haemoglobin level of 8.7 g/dl. The patient did not present cerebral and hepatic AVMs.

In June 2019, during a clinical evaluation in our HHT center, the patient complained about a deterioration in her quality of life with depressed mood, anguish, sadness and frequent crying spells. Laboratory examinations revealed only mild iron deficiency anemia (haemoglobin 10.2 g/dl, mean corpuscular volume-RCV 78.1 fL, red distribution width-RDW 17.4%, ferritin 5.5 ng/ml). She never reported melena and bleedings in other sites. She complained about a worsening of epistaxis in the last 3 months, because of poor compliance to otolaryngologist (ENT) recommendation. We performed an infusion with ferric carboxymaltose and planned a ENT re-evaluation and a psychiatric examination.

PSYCHIATRIC EXAMINATION

The patient was subjected to the following psychometric scales: Psychological Well-Being Index (PWBI) (Dupuy 1984), Hospital Anxiety and Depression Scale (HADS) (Zigmond & Snaith 1983), General Self Efficacy Scale (GSES) (Schwarzer & Jerusalem 1995), Connor-Davidson Resilience Scale (CD-RISC) (Connor & Davidson 2003), State-Trait Anxiety Inventory (STAI

(Spielberger et al 1983), aimed to measure characteristic attitudes and symptoms of depression and anxiety, resilience and self-representations of intrapersonal affective or emotional states.

The patient manifested a markedly depressive mood and a moderate amount of psychic anxiety. She complained an interruption of personal planning and difficulty in reorganizing her life. She also displayed a not complete acceptance of the disease and a scarce participation in the treatment.

The perceived level of well-being was rather low, especially in dimensions concerning self-control, level of management of one's emotions and degree of tension and anxiety. In estimating resilience, we registered a score of 42 at CD-RISC, with the most penalized aspects concerning control, self-confidence and emotion management.

The patient was prescribed a paroxetine-based psychopharmacological therapy (20 mg/die) together with a counseling intervention (individual counseling, 60 minute sessions). Surprisingly, after six months of therapy with paroxetine, the patient reported a significant improvement in the severity and frequency of epistaxis, associated to a better compliance to ENT recommendations. Laboratory findings showed no anemia (haemoglobin 14 g/dl, MCV 93.3 fL, RDW 21.3%) and an improvement in ferritin levels (24.5 ng/ml).

The patient was subjected to a new psychometric evaluation: mood was oriented in a slightly depressive sense (improvement of 4 points on the HADS scale) and also the anxious state symptoms have been reduced by 10 points. The GSES had increased by nine points with an improvement in patient's state of health, motivation and adherence to treatment. The PWBI showed a growth in the perceived level of well-being by 15 points, in particular the control and anxiety dimensions.

Global resilient capacities had been intensified and the patient begun to regain the sense of her own self-efficacy. The disease then came to be configured not only as a sensation-perception of a sick body, but a relationship with the complexity of the individual sick person through an experience of emotion and thought (Jakovljević 2006).

Rare diseases are often the cause of various clinical difficulties. Our treatment model, implementing a "patient-centered medicine", establishes the key figure of the case manager, a specialist who is entrusted with the coordination of the individual case not exclusively dealing

with the medical characteristics of care, but also paying attention to the quality of life and the well-being of the subject, in a more complete perspective, connecting medical, social, relational and psychological peculiarities (Jakovljević & Ostojić 2015).

DISCUSSION

Robust evidence suggesting a strong association between depressive disorders and iron deficiency led us to speculate that the quality of life in HHT patients can have relevant effects on health. A mood deflection can reduce the adherence to the pharmacological treatment and reinforce the perception of being a burden on family and society. The biological association between anemia and depression could be attributed to several plausible biological mechanisms. Dopamine is an endogenous neurotransmitter involved in human emotional processing. Iron deficiency interferes with dopamine metabolism by down-regulating dopamine receptor-1 expression and reducing dopamine transporter density. In addition, iron deficiency can produce alterations in norepinephrine and serotonin signalling, that might also be responsible for emotional behaviors. Dysfunction of dopaminergic, GABAergic, and glutamatergic function underlies many core features impacting on emotional changes, together with metal-mediated oxidative stress mixed with reduced iron concentration. Iron deficit is also correlated with lower cytochrome C levels, associated with the pathogenesis of major depressive disorder (Kim et al. 2018). There are studies describing a higher prevalence of iron deficiency anemia in patients with depression and other psychiatric disorders than in the general population. Some studies suggested the high prevalence of depression and other psychiatric disorders in HHT patients (Chaturvedi et al. 2017).

CONCLUSIONS

This case showed how chronic iron deficiency anemia and depression can be strictly linked. Psychiatric pharmacotherapy contributed to a better self-management of epistaxis and improvement in haemoglobin levels in our patient. Counseling intervention constitutes a helpful tool for the clinicians who work with patients with HHT (Marano et al. 2020). It has been useful to enable our patient to accept thoughts related to unpleasant feelings and to develop coping strategies to defend herself against anger, dependence and helplessness.

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Giulio Cesare Passali, Gabriele Sani, Roberto Pola & Eleonora Gaetani: supervised and gave important contribution.

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