INTRODUCTION

Alopecia areata (AA) is a dermatologic disease that can be seen in all age groups with nonscarring hair loss. The incidence of AA is estimated to be 0.2% of the general population. Although AA can occur at any age, it often starts in childhood, and in about 60% of patients, the first symptoms occur before the 20th year of life. Many factors such as autoimmune, vascular, hormonal, and genetic processes, diet, and mental disorders have been considered in etiopathogenesis. Hair loss is a common complaint in dermatology clinics, including childhood. The second most common cause of hair loss in children was AA. Hair loss in the pediatric group is more important because it is associated with more pronounced psychiatric outcomes. It has been reported that the rates of anxiety and depressive disorder are high in children and adolescents with AA. In an 8–18-year-old study of 74 children and adolescents, the level of anxiety was associated with AA. In a study with Ghanizadeh children with AA, the rate of having at least one psychiatric disorder was 78% and the posttraumatic stress disorder (PTSD) was 7.1%. Here, we present two cases to emphasize the need for consideration of consultation-liaison psychiatry in patients with acute hair loss symptoms. Parents of these two cases gave the written consent for the publication of this report and images.

CASE REPORTS

Case 1

A 9-year-old boy, accompanied by his mother, presented with asymptomatic loss of hair at the scalp developing in 2 months. There was no history of similar illness in family,

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drug intake or trauma, and autoimmune disease; however, there was a history of stress. On dermatologic examination, there was a solitary patch of nonscarring alopecia of size 2.5 cm × 4 cm, present at the parieto-occipital region of the scalp with some regrowth of hairs [Figure 1]. Systemic examination and laboratory tests including complete blood count, biochemistry, thyroid functions, thyroid autoantibodies, Vitamin B12, and folic acid levels were all in normal limits. Potassium hydroxide (KOH) examination of hair did not reveal any fungal elements. At dermoscopy, there were yellow dots, black dots, exclamation mark hairs, and vellus hairs [Figure 2]. We did not perform histopathologic examination. On the basis of clinical and dermoscopic examination, the diagnosis of AA was made. Due to the stress history, we consulted him to the pediatric psychiatry clinic. While he was using topical clobetasol solution for every day since the beginning of his complaints, we stopped topical clobetasol solution and subsequently tailing down to a lower potency corticosteroid, mometasone furoate with topical minoxidil 2% solution once daily. There was a little regrowth after 1 month of this therapy.

After the diagnosis of dermatology, consultation of child and adolescent psychiatry was requested. The patient was admitted to psychiatric evaluation, and there was a state of uneasiness, being easily startled, anxious appearance, wanting to sleep with the mother, not wanting to be alone at home, reluctance to go to school, sleeping disorder, and decline in school success. The interview with the child also indicated that they went to the grandmother and grandfather who lived in the rural area 2 months ago with their family. After this visit, he stated that he stayed there for about 1 week without his parents. During this stay, he was exposed to physical violence and emotional abuse by grandparents, but he could not tell the family because he was afraid. About a month after his return, hair loss began to become apparent. The patient received 8 points for the Children’s Dermatology Life Quality Index (CDLQI). He received 38 points with the Screen for Child Anxiety Related Emotional Disorders (SCARED). The Kiddie Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime (6–18) (K-SADS-PL) was applied the patient. The clinical presentation, Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition criteria, and the results of the scale applied by the clinician were evaluated as PTSD. The Child Posttraumatic Stress Reaction Index (CPTS-RI) was applied and found to score 41 (severe) points. Pharmacotherapy treatment with sertraline and psychotherapy was started.
Case 2
A 10-year-old boy, accompanied by his mother, presented with asymptomatic loss of hair at the scalp which was firstly seen at 6 years of age and then recurred 3 months ago. There was no history of similar illness in family, drug intake or trauma, and autoimmune disease; however, there was a history of stress. On dermatologic examination, there were well-demarcated patches of nonscarring alopecia of size between 3 and 6 cm diameter, present at the vertex and occipital region of the scalp [Figure 3]. Systemic examination and laboratory tests including, biochemistry, thyroid functions, thyroid autoantibodies, Vitamin B12, and folic acid levels were all in normal limits. Ferritin level was low, but complete blood count was normal. KOH examination of hair did not reveal any fungal elements. At dermoscopy, there were black dots andvellus hairs [Figure 4]. We did not perform histopathologic examination. On the basis of clinical and dermoscopic examination, the diagnosis of AA was made. We consulted him to the pediatric psychiatry clinic. There was a little improvement after 1 month with the topical clobetasol solution for every day with oral iron supply.

After the diagnosis of dermatology, consultation of child and adolescent psychiatry was requested. The patient was admitted to psychiatric evaluation and he had a fear of going to school, feeling tense, wanting to sleep with the mother, not wanting to be alone at home, constant state of unease, appetite and sleep deprivation, distress after reminders, and re-experiencing symptom. He had a serious neck injury after peer violence in his school about 3 months ago. During this trauma, he had a shortness of breath and fear of death, and he was hospitalized for 1 week. After about 5–6 weeks to trauma, hair loss began to become apparent. The patient received 15 points for the CDLQI. He received 49 points with SCARED. K-SADS-PL was applied the patient. After psychiatric interview and evaluation, PTSD and attention deficit hyperactivity disorder were diagnosed. CPTS-RI was applied and found to score 47 (severe) points. Pharmacotherapy treatment with sertraline and psychotherapy was started.

DISCUSSION
When we review the literature, we have seen many reports of dermatologic disease and psychiatric comorbidities. In a study with adults with dermatologic disease, 85.1% of patients reported at least one traumatic event in their lives, and 8.6% of them met the diagnostic criteria of PTSD. Patients with PTSD have been reported to have more difficulty coping with skin diseases. Trichotillomania (TTM) can cause hair loss in association with traumatic experience. TTM-diagnosed individuals reported that traumatic and negative events in childhood were statistically higher when compared to healthy participants. In both of the presented cases, there are AA that develops after the traumatic experiences. Differential diagnosis was made other diseases such as TTM which may be associated with traumatic life event.

AA etiology is not fully understood, but pathogenesis is accepted as multifactorial. Nonspecific immunity and organ-specific autoimmune reactions have recently become focus areas. T-cell-mediated immunity, interferons, cytotoxic CD8 T-cells, cytokines, tumor necrosis factor, macrophage migration inhibitory factor, and humoral autoimmune pathology may be important inducers of hair loss in AA. Corticotropin-releasing hormone (CRH) have known pro-inflammatory actions. In the report of the AA series potentially triggered by acute stress, there was upregulation of the affected skin CRH receptor expression.

PTSD is associated with a dysfunction of the stress response system, including hypothalamic-pituitary axis, autonomic and central nervous system, and neurotransmitter changes and has increased levels of inflammatory proteins. Studies have shown that PTSD is associated with changes in the CD8 T-cell population and CD4:CD8 ratio. In PTSD patients, the percentage of CD4 subgroup cells was significantly higher and CD4:CD8 ratio was significantly lower. The relationship between PTSD and innate immune response and interferon signaling genes was determined.

PTSD causes many changes in the immune system, and there is a strong relationship between the immune system and AA. The reduction of the stress effect is also important in terms of immunological mechanisms, quality of life, and mental health. Unfortunately, as in our case, patients may not be in search of psychiatric care. Especially, children may not describe their stressors and parents are not aware. The consultation of child and adolescent psychiatry from AA-diagnosed pediatric patients will provide multiple benefits for patients. At the same time, in terms of PTSD and AA, relationship is needed for long follow-up studies on healing processes and relapses.
Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patients have given their consent for their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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