

**BIRD'S NEST HAIR [PLICA NEUROPATHICA]: A CASE REPORT****\*<sup>1</sup>Dr. Abdullah Mancy, <sup>2</sup>Dr. Lateef Ahmed Abood and <sup>3</sup>Dr. Nusaiba Al- Dalla Ali**

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**ABSTRACT**

Bird's nest hair is a rare acquired irreversible condition affecting scalp hair. In which the hair matted together forming a hard mass of tangled hair. It usually happens in those individuals with psychiatric disturbances in whom neglecting of hair care, infections and infestations of the scalp are more common. Also, frequent uses of different shampoos, chemicals, herbal oils and hair cosmetics will lead to plica formation. Because it was rarely reported in the literature, we report a young female, 14 years old, affected with plica neuropathica. The possibility of multifactorial aetiologies such as anxiety, neglected hair care, a combination of herbal oils and long hair were shared in the appearance of this case.

**KEYWORDS:** Bird's nest, Hair, Neuropathica, Plica.**INTRODUCTION**

Bird's nest hair also known as plica polonica and plica neuropathica, rarely reported in the literature except in certain regions where religious thoughts play a role.<sup>[1]</sup> It is characterized by matting, part or whole of the scalp hair resulting in a hard mass of tangled hair that irreversibly compacted together.<sup>[2,3]</sup> It usually occurs in neglected or improper care of the hair, infestations, infections of scalp hair and psychiatric disturbances of the individual. Also, it has been reported to result from immunosuppressive drug therapy such as azathioprine and methotrexate.<sup>[4]</sup>

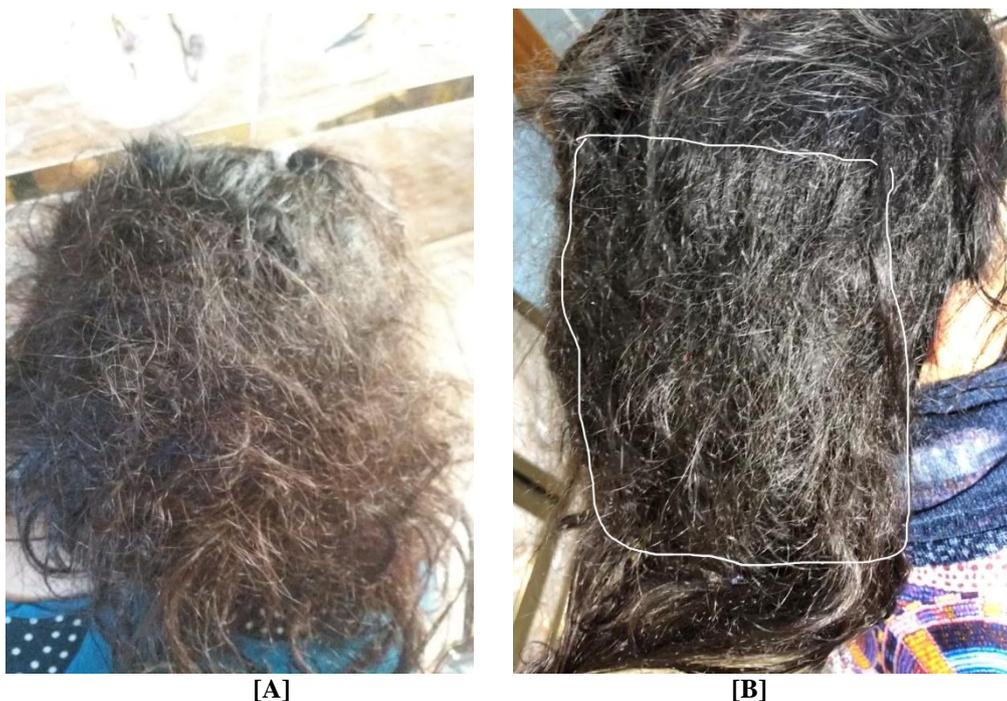
**CASE PRESENTATION**

Fourteen years old female, a student at secondary school, presented to the Dermatology Clinic of AL-Ramadi Teaching Hospital complaining of a block of tangled hair at the occipital region of the head since two weeks past. She was anxious, sometimes crying and not allowed to be examined easily. The hair looked healthy, black to brown, long, clean and no foul smell present apart from the compact mass of dry, coarse tangled hair.

On examination, the hair block was hard, rectangular in shape, about 20 centimetres in length, 12centimetres in width and about 5centimetres thickness. "Fig.1" It attached to the upper part of the occipital region of the head, in about few centimeters and at the other end of it, the hair was normal in a length of 33centimeters. "Fig.2" There was no nits or crust formation. The scalp was healthy, no dandruff and fungal infection of hair were

not demonstrated by KOH 10% examination of the hair. Also, the hair shaft was normal without weathering.

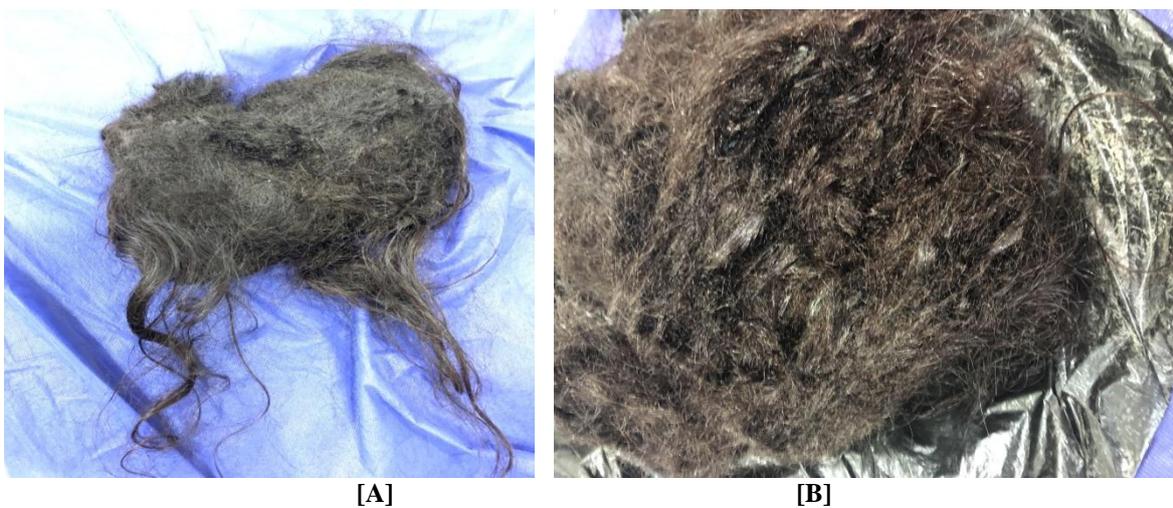
Previously, she had proper hair care, shampooing, combing and oiling of her hair regularly. The condition was started two weeks before visiting the clinic. When she noticed that few strands of hair fused without apparent cause. At that time she applied olive and coconut oil to the hair in an attempt to separate it but without benefit, then tied the hair without washing for two weeks. The status of the hair and that of the patient became worse, again the patient used olive oil and other different herbal oils from nonmedical persons tried to detangle the hair but the hair mass became worse. During examination in the clinic, the patient was anxious and depressed, the psychiatrist's opinion was obtained who prescribed Imipramine 25mg daily. Three weeks after that she was re-examined again, she looks well, stable and informed to cut the hair as this was the only available treatment at this stage. Informed consent was obtained from the patient and an agreement of the scientific committee of our institute was approved.



**Figure 1: Posterior view of the scalp.**

[A]: mass of scalp hair of the young female which looks coarse, dry, twisted, lusterless and uncombable due to

matting of the hair. [B]: show the well-defined block of tangled hair of the same female in figure [A].



**Figure 2: [A] Show matted hair block. [B] demonstrate the interwoven bunches of hair after the cross- section of the block that was shown in figure [A].**

## DISCUSSION

Plica neuropathica was initially reported in 1884 in a patient with hysterical attacks. From that time it was believed to be limited to those with psychological instability. Other names included were “felting” because it resembles what’s happened in wool and textile factories. Also called polish plait, from its prevalence in Poland in the 19<sup>th</sup> century.<sup>[5]</sup> The pathogenesis of plica neuropathica till now not determined, but it has been found that splitting of the hair longitudinally could be a predisposing factor. Exudates and pus from infections of the scalp can lead to glueing of the hair to each other’s producing matting of the hair.<sup>[6]</sup> Hair shaft of the scalp

consist of three layers, the outermost is the cuticle which protects against physical and chemical insults. The cortex is the second layer in which keratin bulk of the hair lies within it, and medulla the innermost layer.<sup>[7]</sup> When the cuticle’s damage occurs, so the cortex which is moist and sticky will be exposed to the environment and enhance a matting of the hair.<sup>[8]</sup> The shaft integrity depends on disulfide bonds when these bonds destructed, so matting will develop more easily.<sup>[9]</sup> Therefore any insult to the hair shaft whether physical or chemical trauma may predispose to hair matting.<sup>[5]</sup> Scalp hair matting has been reported in the literature to result from many factors.<sup>[8]</sup> Psychological instability is

one of the earliest remedies that hair matting was coined to it, plica Polonica was reported in a person with schizophrenia.<sup>[10]</sup> Our case, at the time of evaluation, was anxious, depressed and at the time crying but the previous history did not demonstrate any psychiatric events. We think that anxiety state happened when few bunches of hair tangled together which could be from unknown factors.<sup>[8]</sup> So anxious upset act as a predisposing factor for hair matting.

The infestation of the scalp with pediculosis with secondary pyoderma of the scalp with crust formation will glue the hair. Neglecting of hair washing and combing which arise mainly from psychiatric disturbances will promote hair matting.

Frequent exposure of the hair to chemical substances in shampoos, waving and straightening solutions may contribute to hair damage and hair matting.<sup>[6]</sup> Also, it was induced after a combination of coconut and castor oils.<sup>[11]</sup> In the present case, she has long hair which mostly liable for matting in association with other predisposing factors. Application of a combination of coconut and olive oils to her hair without washing for two weeks in addition to psychological upset, all these factors play a part with each other's to make tangled hair.

## CONCLUSION

About seventeen cases of plica neuropathica have been mentioned in the literature.<sup>[11]</sup> So we present this case in a young female to augment this number and in whom multiple factors participate in the creation of this disease.

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