“Castor Oil” – The Culprit of Acute Hair Felting

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ABSTRACT

Acute hair felting is a rare disorder of scalp hair. In this condition, the hair becomes twisted, entangled as a hard stony mass resembling a bird’s nest. Sudden hair matting has been reported earlier in the literature after vigorous use of chemical and herbal shampoos. Plica polonica is a patchy area of hair matting occurring in due course of time in neglected hair or underlying psychiatric illness. This case is interesting as the whole scalp hair matted immediately after using coconut oil and castor oil following washing. Growing long hair and taking oil bath are cultural and religious customs in South India. The high viscosity of castor oil and long hair had contributed to sudden felting of hair. This disorder of hair is irreversible and the hair should be cut off. Acute nature of this disorder will result in a serious psychological impact on the patient and the family.

Key words: Acute hair matting, bird’s nest hair, plica polonica

INTRODUCTION

A cute hair felting or matting is a rare disorder of scalp hair.[1] Plica polonica or plica neuropathica, a hair matting condition, occurs in due course of time in neglected hair with parasitic infestation, oozing pyoderma of scalp which glues the hair or in case of underlying psychiatric illnesses.[1,2] We report this case as it occurred following the usage of castor oil for the first time in a healthy individual.

CASE REPORT

A 20-year-old girl came to the Dermatology Clinic, complaining of sudden matting of scalp hair for 1 day with a history of application of coconut and castor oil on the day of Diwali for hair wash. She washed hair with regular shampoo which she used since childhood. Then, while drying the hair, the lower end twisted and curled like a bow in a ribbon. On every attempt to detangle, the hair curled much more and length became half of its original length. Personal hygiene and daily hair combing practices were maintained. Pain present due to pressure effects on the hair roots. There was no history of comorbid scalp condition at that time. The patient used castor oil for the first time for hair growth as per the history.

On examination, hair appeared as a compact hair mass resembling a bird’s nest [Figure 1]. Hair appeared dry, lusterless, and bleached [Figure 2]. Mild scaling of scalp was noted. There was no foul smell and no evidence of parasitic infestation or pyoderma. Personal hygiene was adequate.

Psychiatry opinion was sought as she appeared emotionally disturbed following the incident and found to suffer from acute stress reaction. She was allowed to ventilate her
distress and supportive psychotherapy was given. Since acute hair matting is irreversible, she was advised to cut the matted hair.

**DISCUSSION**

Acute scalp hair matting or bird’s nest hair is a rare condition.\(^1\) Only 17 cases have been reported worldwide. The term plica polonica was first coined by Le Page in 1884; he described sudden matting of hair in a patient with Schizophrenia.\(^2\,^3\) Later case reports were published on vigorous use of chemical-containing shampoos, herbal shampoos, and soaps causing acute matting.\(^2\,^6\) Immunosuppressive drugs such as azathioprine and methotrexate have caused hair matting in two patients.\(^7\)

Matted hairs are commonly seen in wandering psychiatric patients in roadsides, temples, and persons involved in spirituality called Swamijis, to get a spiritual image in the community.\(^1\,^8\) There is a religious faith to neglect the hair and get a plica for fulfillment of wish and blessings from god.\(^8\)

Our case is acute matting of hair following application of castor oil. Castor oil and its benefits for scalp hair and eyebrow growth have been believed and followed since ages. Castor oil is extracted from seeds of plant *Ricinus communis*. It is a ricinoleic, monounsaturated fatty acid which can act as humectant and moisturizer. It is volatile and very thick and sticky in consistency.

Hair undergoes cyclical changes, grows and falls in phases and multiple factors come into play for growth and fall as well. Although castor oil is being used in naturopathy and other alternative medicines for various diseases, there are no studies and reports on the uses and benefits of castor oil with regard to hair and hence not proven scientifically.

Various pathogeneses for hair matting were described in the literature, but the exact mechanism is not known. Both physical and chemical factors have been attributed for spontaneous matting.\(^9\) Neglected hair in a psychiatric patient, parasitic infestation and pyoderma, long dense hair, weathering, and splitting have also been considered as minor factors.

“Felting” is the term commonly used in wool and textile industry.\(^3\) Felting technology is used to felt wool, acrylic, and synthetic fibers. The wool fibers or animal hairs are exposed to rotating combs and they are pressed to align into fine layers in a hot liquid medium. Following which the animal hairs or fibers sticks together, they are compressed in a oscillatory plates and heat applied to become felted permanently as a single piece of fabric.\(^10\,^11\)

Growing long hair in women is a traditional custom in South India. Oil bath during festive season is a religious formality followed in India. In our case, castor oil with coconut oil was applied on long hair and washed with warm water, resulted in electrostatic attraction of contiguous hair fibers. The higher viscosity and sticky consistency of castor oil would have attracted the hair fibers. When the hair was washed with warm water, the hair fibers have aligned in parallel, which glued and sealed the hair into one single bunch. Highly viscous castor oil in long hair in a warm liquid medium (water) has followed the spontaneous felting process in the human hair. The single bunch of hair fibers are exposed to friction by the oscillatory movement done

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**Figure 1:** Compact hair mass - bird’s nest hair

**Figure 2:** Hair mass with dry lusterless hair
while washing the hair, resulted in multiple twists and turns ending up in bird’s nest hair.[3,12]

Hair growth can be enhanced or affected by various factors. Only applying hair oils or combos of oil will alone not help in hair growth. Skin itself is producing the natural oil, the sebum. Sebum coats the scalp and hair. Hence, oil can be used to prevent damage of shaft from sunlight bleaching rather than for hair growth. Coconut oil is a safer alternative rather than using other combination of oils which can sometimes result in disaster.

CONCLUSION

Acute hair matting following castor oil application occurs for the first time in the history. The acute nature of the disorder will lead to a sudden psychological breakdown in the patient and the family. This case report would go on to augment the existing data.

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Conflicts of interest

There are no conflicts of interest.

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