



Unpopular pterygium inversum unguis due to popular gel nail polish

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ABSTRACT

Pterygium Inversum Unguis or PIU is a painful condition in which ventral part of the nail plate attaches to hyponychium. It may be congenital or acquired. One of the acquired culprit behind this painful and unattractive condition is gel nail polish. Gel nail polish is a very popular procedure nowadays as along with beautification of nails, it gives it a long lasting effect as compared to conventional nail polish. PIU due to nail polish is not uncommon but is hardly reported in India. Hence, we are reporting a case of PIU secondary to gel nail polish.

Key words: *Pterygium inversum unguis, Gel nail polish*

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INTRODUCTION

Gel nail polish or Ultraviolet (UV) -curable nail lacquer is high on popularity due to cosmetic enhancement of nails aesthetically, prevention of chipping and most importantly its long lasting effect in comparison to conventional nail paints that wear off quickly. But along with the advantages come plethora of adverse effects related to gel nail polish and one of the rare and painful condition associated is Pterygium inversum unguis (PIU). PIU is a painful condition in which there is abnormal adherence of the hyponychium to the ventral surface of the nail plate.[1] We report a case of pterygium inversum unguis, an overlooked complication of gel nail polish.

CASE REPORT

A 28 year old female patient came to dermatology OPD with chief complaint of growth of skin under left thumb nail and pain while cutting the nail of the same thumb. She also complained of brittleness and pain in all the nails while performing daily activities.

Pain over left thumb nail developed on 4th day of second session of gel paint application. The gap between first and second session was 30 days.

On examination, hyponychium was attached to ventral surface of nail plate of thumb. Distal groove was absent (Figure1). Onychoshizia was seen in nail plate of right 2nd and 3rd finger nail. Xerosis was present around the nail plate of all the fingers. All the nails were tender on touch. Patient did not have any similar complaint in the past and did not have any systemic involvement. Family history was insignificant.

DISCUSSION

Caputo and Prandi in the year 1973 described PIU for the very first time in a woman who developed ventral pterygium on multiple fingers of both hands without any underlying cause.[2] Pterygium inversum unguis is an abnormality where ventral surface of nail plate is attached to hyponychium leading to the absence of distal groove. It may be congenital or acquired. Congenital PIU is due to defect in development of distal groove whereas acquired PIU is secondary to diseases like systemic lupus erythmatosus, systemic sclerosis, leprosy, neurofibromatosis etc. One of the causes of acquired PIU is gel nail polish.[3]

Procedure of gel nail polish application involves three steps. Firstly, a base coat is applied for the colour coat to stick to the nail plate followed by exposure to UVA light. Secondly, two color coats are applied and simultaneously are exposed to UVA light after every coat. Thirdly, a final coat of gloss is applied to provide shine followed by UV light exposure. All these steps are important for fixing the gel nail polish to the nail and protecting the nail polish from chipping off. J Cervantes et al in 2017 reported a case series of 17 subjects in Miami who developed PIU after two to five years of gel polish application and concluded

that it remains unclear if PIU is related to chemicals present in the gel polish or it is the process of application or removal.[1] Anil H. Patki in the year 1990 reported a case of PIU in leprosy.[4] Eswari L and Revathi TN in 2015 reported a case of two sister having PIU in second toe of both feet and both were born out of consanguineous marriage.[5] In India very few cases of PIU have been reported and PIU due to gel nail paints has never been reported to the best of our knowledge.

Management of PIU is not very clear. Topical steroids, keratolytics and surgical excision have proven to be ineffective.[3] In our case, PIU resolved by itself within a period of 3 months probably due to growth of the nails causing rupture of gel nail polish from its attachment to the hyponychium.

Figure 1. Pterygium inversum unguis due to popular gel nail polish affecting left thumb nail



CONCLUSION

Gel nail polish is very popular procedure that is done in every other salon. Whether rich or poor it caters to a wide range of population due to its temporary benefits and the frequency at which it is done without any break in between is something to worry about. Many adverse effects are associated with gel nail polish and one of them is PIU. PIU is not an uncommon adverse effect of gel nail polish has never been reported in India. Hence, we report a case of PIU secondary to gel nail paint application due to its rarity in Indian literature.

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