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RESEARCH ARTICLE

SPECIFIC RISKS OF ONYCHOPATHY OF WOMEN OF REPRODUCTIVE AGE

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Abstract

Types of post-traumatic onychopathy of women of reproductive age as a consequence of nail service are analyzed. The specific risks of onychopathy of women of reproductive age who regularly get a gel nail polish manicure have been identified.

Key words:-

Onychopathy, Women Of Reproductive Age, Nail Plate

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Introduction:-

To start with, the human nail can be considered to have many mechanical and social function, one of the most prominent of which are physical protection of the extremity and a vehicle for cosmetics and esthetic manipulation [2]. Therefore many post-traumatic changes have occurred, e.g. the most common type of onycholysis so-called lunar onycholysis especially in women who got the nail apparatus trauma while getting a manicure [8]. On the other hand, these changes could mimic onychomycosis that accounts for 50 to 60% of all nail pathology [9].

The aim of the study:

To determine the types of post-traumatic onychopathy owing to usage of gel nail polish manicure in women of reproductive age in order to optimize the differential diagnosis of the nail plates changes.

Materials and methods:

We observed 38 women aged 19-35 years with clinical manifestations of post-traumatic onychopathy, without concomitant systemic diseases. All patients complained of deteriorating nail condition after a continuous gel nail polish manicure during 1-2 years. All patients were carried out: clinical inspection of skin and appendages; fungal (microscopic and cultural) tests of the nail plate to rule out the onychomycosis [9]; consultations with related specialists, such as therapist, endocrinologist, neurologist to find out the possible contributing factors that could lead to the violation of nail structure. In all women, the results of fungal tests of nail plates were negative.

Results:-

According to the results of clinical observations, in 16 (42%) women noted increasingly brittleness of the nails (breaking off the free edge of the nail with an uneven fringed edge), in 12 (31.6%) patients keratin degranulation was detected (white furrows, spots on the nail plate), in 10 (26.3%) - onychoschisis or lamellar dystrophy (horizontal splits within the nail plate.), in 9 (23.7%) - onychorrhexis (long-wise (longitudinal) splitting or ridging of the nail plate), in 8 (21%) women - hapalonichia (softening of the nail plates, which are easily bent and break off with the formation of cracks on the free edge), 7 (18.4%) women - onycholysis (the painless detachment of the nail from the nail bed at the tip of the finger), 3 (10%) subungual hyperkeratosis (thickening of the nail plate or oyster-like appearance). Brittle nail syndrome (onychoschizia with onychorrhexis) was seen simultaneously in 9 out of 38 cases that were introduced. as longitudinal splitting or ridging of the nail plate.

Discussion:-

Onychodystrophy is a common, chronic malformation of the nail that is aesthetically displeasing and can significantly impact patient quality-of-life [5, 8]. On the one hand, changes in the nail plates in most cases are not specific to certain diseases, and absolutely identical onychodystrophies meet in case of various diseases whether a fungal or non-fungal etiology. On the other hand, nail damage can be as a part of some syndromes as manifestations of many diseases of the internal organs [1]. Misdiagnosis can result in failure to recognize a severe disease in urgent need of treatment and in the prescription of treatments that are inappropriate, long, ineffective, and expensive. The lack of reliable diagnostic criteria for onychopathy in practice often lead to diagnostic errors, inadequate therapy and thus they must not be treated as an onychomycosis without diagnostic certainty [4, 8]. In addition, the procedure of applying a gel nail polish manicure foreknow mechanical, chemical and physical effects on the nail plate, which is quite traumatic and can contribute to inflammatory, infectious, in particular the fungal complications [6]. Moreover, acrylic nails with severe onychodystrophy and psoriasiform changes including onycholysis and subungual hyperkeratosis were observed in 2 patients who did not realize the association between the use of acrylate-based manicures and nail changes and 1 patient had been previously misdiagnosed and treated unsuccessfully for nail psoriasis [7]. Sometimes deformation of the nail plate and impaired growth in form of the stratification and the formation of additional keratin plate could be caused by surgical removal of the ingrown nail, that provoked the displacement and mechanical damage of the normal structure and function of nail matrix cells. In short, aforesaid led to bifurcation of the nail plate at the horizontal plane [3].

Conclusions:-

Dermatologists need to know the materials and methods used in nail service to correctly put the diagnosis and prevent cosmetically induced nail disorders. According to the obtained data, the most common post-traumatic onychopathy were the nail fragility (42%) and the keratin degranulation (31.6%). In our opinion, the usage of nail service by women is safe, but to store healthy nails women should: take periodic breaks between manicure (at least 3 months because rate of fingernails' growth can vary between 1.9 and 4.4 mm/month [2]); it is strictly forbidden to manipulate the cuticle and clean the nail bed with the sharp objects, use individual tools and qualitative nail products. The experienced clinician should collect an accurate anamnesis vitae, morbi and profound information about the preferred type of manicure service of women of reproductive age with onychopathy, especially in cases of suspected any nail disorders refractory to treatment to avoid aggravation the current situation.

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