ORIGINAL ARTICLE

Stress and Hair: Are they Connected?

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ABSTRACT

Aim: To study the prevalence of hair loss and graying of hair in young age groups as hair loss and grey hair is a general problem now days. Our research was conducted to find out the impact of stress on hair loss and grey hair.
Methods: This cross-sectional study was carried out at Multan Institute of Health Sciences, Multan from 1st June 2016 to 31st December 2016. We assess the prevalence of hair loss and grey hair among 200 female students of age group 18 to 23 years. We forbade our volunteers from shampooing their hair for 5 days and after shampooing we asked them to count their hair fall. We used Perceived Stress Scale by Cohen to assess the level of stress.
Results: Results showed that people with sedentary life style who are in high perceived stress category are prone to have hair loss and grey hair at an early age. A stressful competitive life with lack of exercise, addiction to certain non-nutritious food and poor diet leads to 65% hair loss and 15% grey hair in young age groups.
Conclusion: Hair loss and grey hair if not genetic or due to certain disease can be avoided by certain life style modifications.
Keywords: Hair wash test, Perceived Stress Scale by Cohen, Levels of stress, Addiction, Non nutritious food

INTRODUCTION

We know that there are many medical & non-medical causes of hair loss and grey hair that include (1) family history, (2) hormonal Imbalance, (3) drugs (chemotherapeutic, certain blood pressure control drugs, birth control pills, etc.), (4) radiations, (5) thyroid problems, diabetes, lupus, anemia, psoriasis, dermatitis, (6) cosmetic procedures (hair dye, extenso, balayage, rebonding etc.) (7) pregnancy, (8) lack of vitamin C&E, (9) low protein diet or junk food and (10) genetic defects[1-11].

Our research is according to find outdoors the results about stress or sedentary lifestyles style about hair. Does stressful lifestyle including extra mental recreation cause nib loss or gray hair? Would a character with challenging studies/choppy labor hold more cloudruin/grey hair? The age or speed at as our cloud turns grey yet starts off evolved in accordance with fall varies greatly. It is determined by using deep factors, our genetic disposition, chemical exposures or the preceding causes. But we particularly focused about the results regarding continual strength upon cable fall yet grey nib[5,12].

SUBJECTS AND METHODS

This cross-sectional study was carried out at Multan Institute of Health Sciences, Multan from 1st June 2016 to 31st December 2016. We did a cross sectional study to assess the prevalence of hair loss and grey hair among 200 female students of age group 18 to 23 years, we used a questionnaire method for collection of our data. We forbade our volunteers from shampooing their hair for 5 days and after shampooing we asked them to count their hair fall. 65%of our participants had predominance of hair more than 5cm in length on shampooing. Hair fall is considered positive if 100 or more hairs are accumulated**[4].** We used Perceived Stress Scale by Cohen to assess the level of stress.**[2]** Scores ranging from 0-13 are considered in low stress category. Scores ranging from 14-26 are under moderate stress. Scores ranging from 27-40 are moderate stress. Scores ranging from 27-40 are considered high perceived stress. If Hair Collected are >100 on Hair wash test, it is considered to have excessive hair loss.

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RESULTS

Sixty five percent had hair loss and 15% grey hair (Figs. 1-2). According to Perceived Stress Category, 10%participants were in low category, 35% were in high stress category and 55% were in moderate stress category. Among 65% hair loss participants, 33% were from moderate stress category, 30% from severe stress category and 2% from low stress category. Among 15% Grey hair participants, 10% were from severe stress category and 5% were from moderate stress category. Among 15% of the total participants were involved in regular exercise and among those who were involved in regular exercise, 10% were from low stress category and 5% from moderate stress category (Fig. 3). 85% were not involved in any type of physical activity / exercise, 65% were addicted to certain non-nutritious food items to overcome their level of stress. Among 65%, 35% were tea coffee addict, 20% Tulsi supari and 10% cold drink addicts. 75% were on poor diet. 35% frequent users of hair dye, ironing, Balayage and hair dryer. 10% had a positive family history of early greying of hair. These 10% were also in high perceived stress category (Fig. 4).

Among 65% addicts 30% tea coffee and 5% cold drink energy drinks addicts were from severe stress category. 20% Tulsi supari 5% energy drink addicts and 30% no addiction participants were from moderate stress category. 5% tea coffee addict and 5% no addiction were from low stress category. Among 75% participants who were not taking balanced diet 35% were from severe stress category and remaining 40% were from moderate stress category. Only 10% low stress category and 15% moderate stress category were on balanced diet. Among 35 % frequent hair cosmetic users, 20% were from moderate stress category, 10% were from low stress category and 5% were from severe stress category (Fig.5).

Fig. 1: Healthy and hair loss

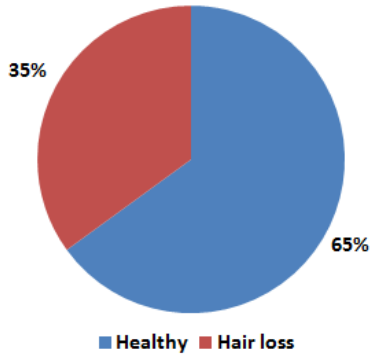


Fig. 2: Healthy and grey hair

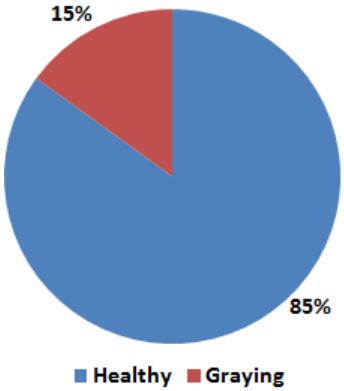


Fig.3: Stress impact on hair

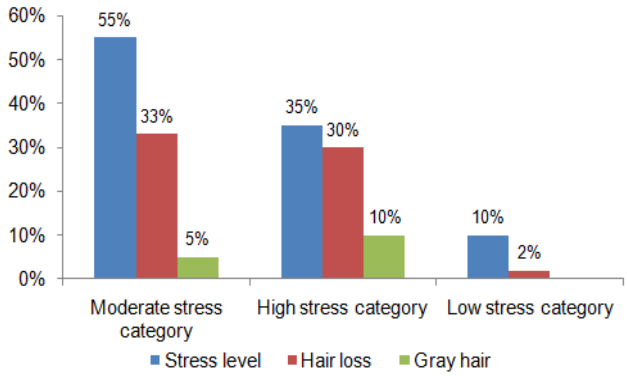


Fig. 4:

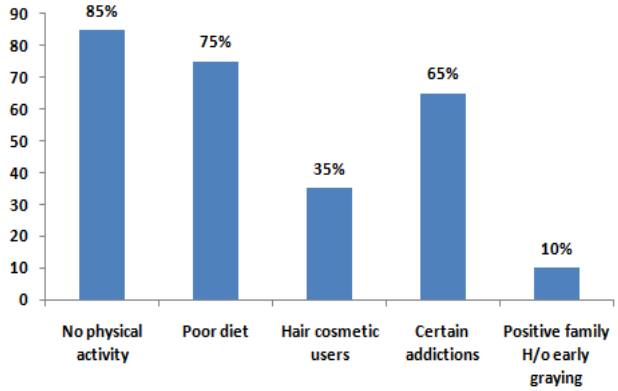
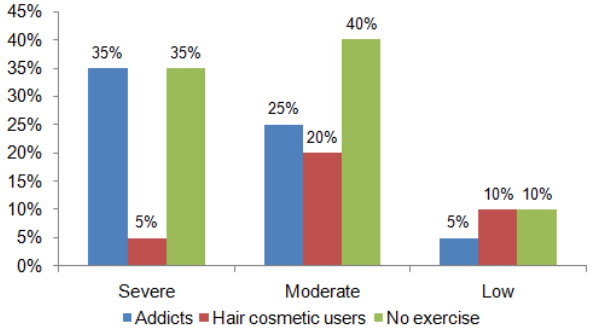


Fig. 5:



DISCUSSION

Sixty five percent of our participants had hair loss and 15% had early greying of hair. In this study we found that the prevalence of hair loss on female students were quiet high. 130 students (65% had significant hair loss as determined by hair wash test. We also found high prevalence of moderate to high stress, almost 180 (90%) students were found to have moderate to high stress. And in our study we reached to this conclusion that there could be an association between stress and hair loss in young female students. However the prevalence of early greying of hair in female students was quiet low only 15 % (30 students had grey hair). The interpretation of our results suggested that stress; regular exercise and balance diet do play their role in hair fall and greying at an early age[5,13-18].

We know that there are 3 phases of hair growth[6]. Ninety percent anagan – growth phase: hair grows ½" per month, 1-2% catagen – transitional phase, 10-14%telogen – resting phase: this is the phase in which eventual hair fall occurs. Many scientific studies have shown that when you are in stress, the percentage of your hair in telogen phase is increased. So the more stressed you are the more your hair will fall[5,14,19-21].

Theories because of the gradual break regarding pigmentation on cable involved dirt on enzymes involved in the technique on melanogenesis. Stress reasons release regarding neurotransmitters worried of our fight then flight response. Normally, the release over it neurotransmitters is brief lived yet has superior attributes. Another concept has been proposed that says,'' the lengthy time period production of it neurotransmitters, however, perform motive DNA harm or manufacturing over much fair radicals. Free radicals and operative oxygen species are particularly effective molecules as perform immediately harm lipids, proteins, DNA and mobile structural membranes. As we know nib follicles occurrence younger quantities about hydrogen peroxide who make you cloud lighter, that hydrogen peroxide is broken under via an enzyme called catalase. Stress, poor consuming habits, less intake over milk, vitamins, cheese or wheat may minimize the stage of catalase, as a result allowing hydrogen peroxide according to launder the cloud from internal out. However no certain association has been assure scientifically yet[22].

Another study says as stress hormones i.e., ACTH promotes migration on melanocytes from nib follicles according to epidermis, displaying as immoderate accent may raise it passage also plenty at the price of preserving

melanocytes within the hair follicle; it migrate towards epidermis, erection the hair white. As greying for the duration of getting older is the end result about exhaustion yet impairment concerning melanocyte stem cells, then a similar mechanism can work such including force related graying[24-26].

Studies are still being conducted about the association of stress and early graying.[27] Stress can result in early hair de pigmentation specifically in those with a positive family history and genetic predominance[11,27]. The hypothesis that stress is a cause has yet to be scientifically proved, its cellular and molecular origins are not fully understood[27]. However among our study, we functionate determined an association of stress then before long greying about hair. Whether power with the aid of itself reasons cable in imitation of gogray is nevertheless uncertain, we propose so further studies concerning force then graynib ought to keep performed along large samplesize[5,27].

CONCLUSION

Hair fall is frequent amongst female scholar concerning Multan Institute of Health Science and a substantial affiliation was located between strength or hair arrive while gray nib is not frequent amongst lady students or an specific link can't remain hooked up within stress or gray cable as these 10% students additionally had a nice household history concerning before long greying concerning hair.

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