

EVALUATION OF SERUM SUBSTANCE P,FOLIC ACID AND FERRITIN IN FEMALE PATIENTS WITH HAIR FALL AND TRICHODYNIA

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Introduction

Trichodynia is described as a distressing, painful sensation of the scalp hair and/or the skin of the scalp that becomes more severe on touching the hair without any underlying cutaneous disease and is commonly associated with hair shedding. Later on it is defined as diffuse or spotty tenderness, tingling, crawling, itching, burning, and uncomfortable awareness of scalp.

Trichodynia is more prevalent in women (20%) than men (9%) and is directly correlated with hair loss.

Substance P and other neuropeptides are thought to be released in response to many stimuli which results in perifollicular inflammation. Nutritional deficiencies such as vitamin B12, iron , vitamin D, folic acid and zinc have also been suggested to play a major role.

The diagnosis of trichodynia relies on careful history taking, Careful psychological examination , special diet habits and special hair care routine. .

Dermoscopic examination for the scalp to confirm the cause of hair fall .

II.Exclusion Criteria:

1. Chronic debilitating disease : malnutrition , diabetes, malabsorption syndrome
2. Pregnant or lactating women
3. Children less than 10 years
4. Women taking any supplements in the past 6 months or any topical treatment.
5. Patients on chemotherapy .
6. Autoimmune diseases as systemic lupus, Hashimoto
7. Hormonal disturbance as polycystic ovary syndrome, hyperprolactinemia, or hypothyroidism.

Results

Table (1): distribution of the patients and control according to serum substance p

	Cases (n = 100)	Control (n = 100)	U	p
Substance P				
Min. – Max.	0.07 –1.64	0.52 – 1.15	4127.0	0.033*
Mean ± SD.	0.70 ± 0.23	0.70 ± 0.12		
Median (IQR)	0.72 (0.65 –0.81)	0.66 (0.60 – 0.75)		

IQR: Inter quartile range

SD: Standard deviation

U: Mann Whitney test

p: p value for comparing between the two studied groups

*: Statistically significant at $p \leq 0.05$

Table (2): Table (2) distribution of the patients and control according to serum folic acid

	Patients (n = 100)	Control (n = 100)	U	p
Folic acid				
Min. – Max.	2.91 –20.90	1.06 –20.53	4147.0*	0.037*
Mean ± SD.	11.34 ± 3.99	12.07 ± 3.09		
Median (IQR)	10.77 (8.85 –13.65)	12.06(10.01 –14.01)		

IQR: Inter quartile range

SD: Standard deviation

U: Mann Whitney test

p: p value for comparing between the two studied groups

*: Statistically significant at $p \leq 0.05$

Aim of the work

The aim of this study was to evaluate substance P, folic acid and ferritin in serum of female patients with hair fall and trichodynia .

Patients and methods

This study included 100 female patients , suffering from trichodynia and hair fall as telogen effluvium, alopecia areata or androgenic alopecia and one hundred normal females as control group.

I.Inclusion criteria:

1. Patients older than 16 year old.
2. females with any type of non cicatrical hair fall as telogen effluvium, alopecia areata or androgenic alopecia.

Conclusion

Trichodynia is a common complain in female patients who suffer from hair fall as alopecia areata, telogen effluvium, androgenic alopecia and other conditions

Measurement of substance P could be of value in cases with trichodynia and hair fall.