

## ACUTE TELOGEN EFFLUVIUM IN 503 FEMALE PATIENTS: THE VALUE OF THE TRIGGERING CAUSE TO PREDICT FEMALE ANDROGENETIC ALOPECIA (FAA) ASSOCIATION

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**Background:** Acute telogen effluvium (ATE) may be associated with female androgenetic alopecia (FAA), but predictive factors of ATE-FAA association and/or progression to Chronic Telogen Effluvium (CTE) have not been reported.

**Objectives:** To identify predictive clinical factors of ATE-FAA association or ATE progression to CTE.

**Methods:** We have retrospectively analyzed 503 ATE patients with a minimum 1-year follow-up. Demographic and clinical variables considered were: age, year when ATE diagnosis was made, region where patient was located, different oral treatment modalities, and Minoxidil topical therapy. Triggering causes were classified as follows: (1) Seasonal hair loss, (2) Severe Diet, (3) Postpartum, (4) Iron deficiency, (5) Psychoemotional stress, (6) Thyroid dysfunction, (7) Medication intake or withdrawal, (8) Antineoplastic therapies and/or major surgery, (9) More than one of the above mentioned. Chronic telogen effluvium (CTE) diagnosis was established when ATE lasted longer than 1 year. FAA diagnosis was always established by the patient's physician. Univariate analysis and a binary logistic regression model were used to identify independent predictive factors of ATE-FAA association and CTE progression.

**Results:** Overall 70.2% of patients were cured or experienced significant improvement within 6 months. Mean patient age was different between ATE-cured ( $43.9 \pm 15.2$ ) and CTE patients ( $49.0 \pm 16.6$ ) ( $P < .01$ ). Minoxidil therapy (MX) improved patient outcome with a lower percentage of progression to CTE. MX: 27.4% CTE; Non-MX: 36.3% CTE ( $P = .063$ ). Additional oral treatments did not show any correlation with progression to CTE. Triggering causes with higher risk of FAA association were: severe diet (10.6 odds ratio), iron deficiency (10.6 odds ratio) and thyroid dysfunction (16.4 odds ratio) when compared with seasonal hair loss as reference. ( $P < .001$ ).

**Conclusions:** Triggering cause is an independent predictive factor of ATE-FAA association. Patients suffering ATE may benefit from different therapeutic approaches (depending on which is the triggering cause) to prevent or treat FAA association.

Variables	Triggering Causes <sup>b</sup>
Age at the time of diagnosis	(1) Seasonal hair loss
Triggering cause	(2) Severe Diet
Year when ATE diagnosis was made	(3) Postpartum
Area of Spain where Svenson center was located	(4) Iron deficiency
Oral treatment modality	(5) Psychoemotional stress
Minoxidil topical therapy <sup>a</sup>	(6) Thyroid dysfunction
	(7) Medication intake or withdrawal
	(8) Antineoplastic therapies and/or major surgery
	(9) More than one of the above mentioned.
Year of Diagnosis	Area of Spain - Svenson center
(1) Before 2010	(1) Balearic Islands
(2) 2010	(2) Canary Islands
(3) 2011	(3) Madrid Centers (7 centers)
	(4) Mediterranean regions
	(5) Northern Spain
	(6) Southern Spain
Oral Treatment Modalities <sup>c</sup>	
(1) Pyridoxine,	
(2) Pyridoxine plus L-Cystine	
(3) Pyridoxine plus L-Cystine plus L-Arginine	
(4) Multivitamin compound	
(5) Other different treatment	
(6) No oral treatment given	

Notes  
(a) Topical Minoxidil was used at 5% concentration 1-2 times per day and indicated according to the patient physician's clinical criteria.  
(b) Psychoemotional stress category was only considered when all other triggering causes were excluded. Iron deficiency category was only considered if not associated to severe diet or postpartum condition.  
(c) Svenson Medical standard oral treatments for diffuse hair loss in female patients: Diagnosis and appropriate treatment of potential triggering causes such as: anemia, iron deficiency, thyroid dysfunction, severe diet, etc.  
Pyridoxine (300mg) 1 tab per day during four months.  
Add L-Cystine (500mg) 1 tab per day, with or without L-Arginine (500mg) 1 tab per day, during two months.

