

## Effectiveness of N-Acetylcysteine in the Treatment of Adults with Trichotillomania: An Evidenced Based Review

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**Abstract :** Background: Trichotillomania is a psychiatric condition that is very challenging to treat, with no first-line medications approved by any medical agency. It is defined as a recurrent compulsive habit of pulling out one's own hair, usually from the scalp and eyebrows area, but it can also affect eyelashes or any other hair-bearing area. N-acetylcysteine, a glutamate modulator, has been studied as a possible treatment for several psychiatric and neurological disorders, considering its role in attenuating pathophysiological processes responsible for compulsive behaviors and, therefore, trichotillomania. Objective: This study aims to determine the efficacy of N-acetylcysteine in the treatment of adults with trichotillomania. Methodology: The authors researched guidelines, standards of clinical guidance, systematic reviews, meta-analyses, and randomized clinical trials, published in the last 20 years using the MeSH terms: "Trichotillomania" and "N-acetylcysteine" in the following databases: PubMed, Cochrane library, National Guideline Clearing House, National Institute of Health and Care Excellence (NICE), Canadian Medical Association Practice Guidelines and Database of Abstracts of Reviews of Effectiveness (DARE). The Strength of Recommendation Taxonomy (SORT) Scale, from the American Family Physician, was used to evaluate the level of evidence and assign the strength of recommendation. Results: The research found fifteen articles, among which only three were eligible according to the inclusion criteria: 1. systematic review and 2. meta-analyses. There was evidence of a probable beneficial effect of N-acetylcysteine on treatment response and reduction of trichotillomania symptom severity in adults, with moderate certainty in the effect estimate. There was no evidence of effectiveness with the use of inositol, antioxidants, naltrexone, or selective serotonin reuptake inhibitors (SSRIs) in the treatment of adults with trichotillomania. Clomipramine and Olanzapine showed potential treatment benefits, with low certainty. N-acetylcysteine had the least severe side effect profile in adults compared with the other potentially beneficial pharmacological treatments. Conclusion: Evidence points towards the effectiveness of N-acetylcysteine in the treatment of adults with trichotillomania, which exhibits a good tolerability profile with minimal adverse effects. Therefore, the authors attribute a level of evidence 2, the strength of recommendation B, to the prescription of N-acetylcysteine in the treatment of adults suffering from trichotillomania (SORT analysis). Further investigation is needed in order to extract high-quality conclusions from the meta-analysis.

**Keywords :** trichotillomania, hair pulling, treatment, n-acetylcysteine

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