Successful Treatment of Excoriation Disorder with IV N-Acetylcysteine

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BACKGROUND

Excoriation disorder involves compulsive manipulation of skin with tissue damage that can lead to infection, pain, and scarring. Patients with chronic excoriation disorder often complain of pain on showering and distress over scarring. No consensus exists around optimal treatment (Lochner, 2017), and while case reports and clinical trials demonstrate the efficacy and safety of oral n-acetylcysteine (NAC), intravenous NAC's efficacy has not been explored as thoroughly. NAC increases extracellular concentrations of glutamate in the nucleus accumbens, thus inhibiting further presynaptic release of glutamate (Grant, 2016). This may normalize dysregulated glutamate in compulsive disorders and may be responsible for decreased skin picking behaviors.

CASE SUMMARY

The patient was a 38-year-old woman admitted to the medicine service due to baclofen and acetaminophen overdose precipitated by an argument with her fiancé. She endorsed recent increases in stress related to changes in her relationship with her daughter and increased responsibility in caring for her grandson.

Medical History

Psychiatric History
- MDD
- GAD
- PTSD
- Excoriation disorder, diagnosed 8 years prior

Substance Use
- Cannabis
- Tobacco
- MDMA

Medical History
- No known medical conditions

Hospital Medications
- IV NAC (150mg/kg)
- Oral NAC
- Escitalopram
- Hydroxyzine
- Ferrous Sulfate

Discharge Medications
- Oral NAC, 600mg daily
- Escitalopram, 20mg daily
- Hydroxyzine, 25 mg PRN
- Ferrous Sulfate, 325mg daily

Hospital Course

Hospital Day 1
IV NAC dosed by weight (150mg/kg) was initiated for acetaminophen overdose. Initially, 14.97g of NAC was given. Two more doses (4.99g and 9.98g) followed.

Hospital Day 2 & 3
Steady dose of 9.07g **IV NAC** given on each day.
Patient's family reaches out and increases support.

Hospital Day 4
Patient describes decreased skin picking

Hospital Day 5
Escitalopram 10mg PO initiated

Hospital Day 6
Mindfulness-based and psychotherapeutic interventions for depression and excoriation disorder are introduced.

Hospital Day 7
Continued to introduce mindfulness-based and psychotherapeutic interventions. Patient reports decrease skin picking.
Oral NAC capsules (600mg) once daily are introduced.
Patient transferred to inpatient psychiatry unit.

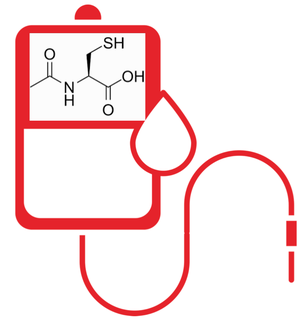
★ **Hospital Day 10 (Discharge)**
Patient no longer reports depressive symptoms and skin picking.
Discharged on **oral NAC, escitalopram, hydroxyzine, and ferrous sulfate**

DISCUSSION

Improvement in excoriation disorder was seen in this patient prior to the initiation of antihistamine and SSRI therapies. This suggests that high dose IV NAC led to rapid resolution of the patient's excoriation disorder. However, the patient also had improvement in her depressive symptoms and had enhanced social support plus mindfulness-based and psychotherapeutic interventions. The role that any of these items played in improvement cannot be discounted.

CONCLUSION

IV NAC is a readily available medication that is safe, inexpensive, and requires minimal expertise to administer. Currently, patients with psychiatric disorders routinely receive interventional procedures such as ECT, TMS, and ketamine infusions that each come with their own side effect profiles. Pending further supportive research, IV NAC for excoriation disorder should be instituted on a larger scale to help patients.



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