

Clouds behind the silver lining: Delusional infestation complicated by argyria

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Background

Delusional infestation (DI) is a rare disorder characterized by delusions of being infested by pathogens, often parasites, despite evidence to the contrary. Argyria is a result of silver accumulation in the body following its excessive ingestion, mostly presenting as a blue-grey discoloration of the skin and mucosal linings.¹ We present the case of a patient with DI who ingested colloidal silver as its treatment, and review the literature for possible related complications.

Case

An 84-year-old male was admitted to the ICU for management of an NSTEMI and SVT, and psychiatry was consulted to evaluate for DI. The patient believed that he had been infested with parasites for over thirty years, and had ingested oral colloidal silver solutions weekly for the last twenty years in an attempt to treat this infestation. Despite his prominent delusions, he maintained two successful businesses, retiring 18 years prior. He now demonstrated significant neurocognitive impairment with predominant deficits in executive functioning, abstraction and delayed recall with a MoCA of 13/30. Additionally, he developed emergence of novel persecutory delusions believing his landlord was targeting him by stealing items in his home and altering his car breaks. While his persecutory delusions led to placing blockades at his door and utilizing cameras to monitor the house, he maintained the ability to continue volunteering at a local business, socialize and perform most ADLs. On exam, his face, sclera, and hands had a bluish-grey skin pigmentation and laboratory values significant for pancytopenia and elevated reticulocyte count, lipase, ALP and AST. He had no abdominal pain and CT of the abdomen and pelvis demonstrated hepatic steatosis. While initially agreeable to psychiatric care, he was ultimately lost to follow-up.



Figure 1. Picture of the patient with blue-grey skin discoloration most prominently observed in sun exposed skin surfaces, sclera and nails.



Figure 2. Enlarged view of the blue-grey nail beds observed in this patient.

Discussion

Argyria not only affects the skin but can also cause injury to the liver and kidneys.² The neurological effects associated with oral colloidal silver ingestion are less well-documented, but there are reports of the development of seizures, CNS degeneration, and deposits of silver in brain tissue found at autopsy.³ Given that exposure to heavy metals such as copper, cadmium, and aluminum is correlated with cognitive impairment, we must consider the potential risk of cognitive impairment with prolonged exposure to colloidal silver.⁴

Conclusions

- CL psychiatrists may be the first and only psychiatric encounter for a patient with DI.
- Psychiatrists should remain vigilant about the treatments that patients with DI might use, including remedies containing heavy metals.
- Further studies are needed to better understand the neurotoxic effects of colloidal silver.

References:

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