



The eyes do not see what the mind does not know:

a peculiar case of lead poisoning

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BACKGROUND

- Lead poisoning remains a significant environmental hazard in the US.
- New York State requires testing all children for lead at age 1 and 2 years (NYCRR Title X, Part 67-1.2)
- The actionable level of lead in blood is 5µg/dl according to NY State.
- Almost 15% of the population in Dutchess County speaks a language other than English. The limited English proficiency of recent immigrants residing in medically underserved areas like Poughkeepsie, along with poor health literacy pose an increased risk for lead poisoning.
- Outreach activities for lead poisoning prevention should take into consideration different races and ethnicities along with their unique cultural practices and disseminate linguistically appropriate literature.
- Lead-based paint continues to be the most common source of lead poisoning in children, but other household consumer products like cooking utensils, spices, folk remedies, candies, cosmetics, jewelry, and toys may also contain lead.

OBJECTIVE

The aim of this case report is to describe a success story and highlight some of the unlikely sources of lead poisoning which could otherwise be missed if we are not looking for them.

CASE REPORT

1- A two-year old girls fingerstick(*FS) showed Elevated blood lead level of 18.3 µg/dl.(Fig.1). A confirmatory venous blood lead test was done which was 12µg/dl.

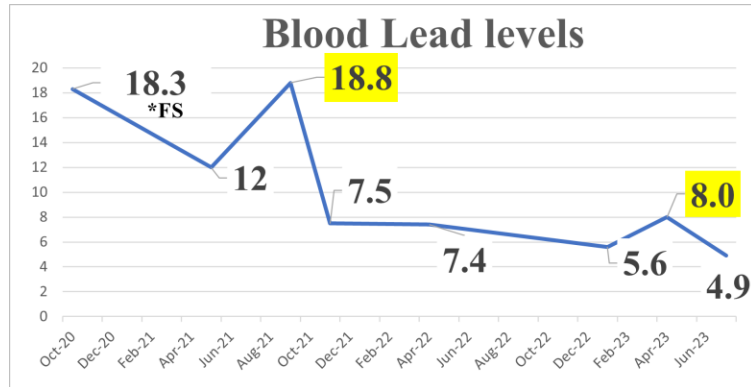


Fig.1. Blood Lead levels (µg/dl) of the child 2020-2023



Fig.2. & 3. Traditional glazed pottery recovered from the household kitchen

2- Developmental Screening: Developmental delays identified; Child referred to the Early Intervention program. Parents advised to follow up with the child’s healthcare provider for medical management. Risk reduction education and nutrition counseling provided to parents.

3- The environmental risk assessment findings: Deteriorating ceiling paint, few frictional surfaces that tested positive for Lead with the XRF. Bare soil area in the backyard was also observed. Abatement of the lead source ensured through remediation, after which Blood Lead levels of the child started coming down.

4- However, in April 2023, the Blood Lead Level suddenly went back up to 8.0 µg/dl.

5- A second inspection of the dwelling was conducted, whereby earthen glazed cooking ware/pots like traditional pottery from Central America (Fig.2.&3.) were found in the kitchen. The family had purchased these from a bodega in Poughkeepsie and were using them to boil rice. The glazes were burnt off in the bottom half of the pots from usage. The family was instructed against using those pots. Follow up testing of the child showed a steady decline in the Blood lead level (Fig.1). The pots were the most likely source of lead.

References:

Quick reference guide: Management of children according to blood lead level. <https://www.health.ny.gov/publications/2561.pdf>

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Source: U.S. Census Bureau; American Community Survey, 2020 American Community Survey 5-Year Estimates, Table S0101

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OTHER U.S. CASES OF LEAD POISONING



Fig.4. Ya Kward Pak (Tongue powder) 1 yr. Child BLL: 61mcg/dl



Fig.6. Religious powder, Sindoor (Lead tetroxide)

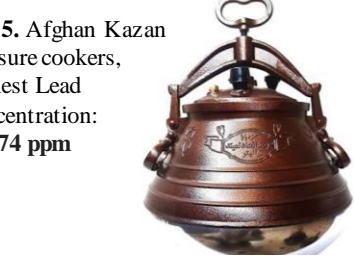


Fig. 5. Afghan Kazan pressure cookers, Highest Lead Concentration: 66,374 ppm

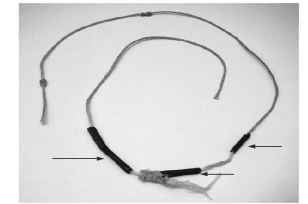


Fig7. Cambodian amulet with leaded beads Childs BLL 20mcg/dl

CONCLUSIONS

Lead glazed pottery can be a source of lead poisoning especially when food is cooked, stored or served in them. Public health professionals should be aware of cultural practices in their community that expose families to lead and be mindful of unusual sources of lead. Families should be made aware of the risks of using such products at home.

KEY TAKE AWAYS

- Lead screening of all children at age 1 & 2 years should be ensured because it detects asymptomatic cases of lead poisoning in children.
- Providers must use the standardized lead screening questionnaire on every Well Child visit annually to assess the risks to all children between ages 06 months to 6 years.
- Engage community partners including faith-based organizations to deliver culturally competent messages that address these traditional practices in immigrant families.
- Design a communications strategy for local media to promote awareness about consumer products likely to be a source of lead.

NYSDOH Lead Info:

