

Case Report
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Recurrent Toxic Hepatitis, Benzene Exposure and Symptomatology of Formaldehyde Disclosure

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Abstract (Part 1)

Two episodes of hepatitis occurred in a female child, first at age 6 and later at 13 years and were ensued by an apparent good health lasting 35 years.

At the age of 43, negative hepatitis A, B and C antigens were disclosed.

Prior to each hepatitis incident, the child had played with a “magic balloon”.

The toy carries a high benzene content (x7 – x9 times the permitted concentration).

Case Presentation

A Moroccan girl of 6, presented with jaundice – yellow sclera and dark urine. In the absence of appropriate tests, the diagnosis of hepatitis was nevertheless established.

At the age of 13 years, a relapse occurred, seemingly more severe (abdominal pain, nausea, fatigue and weakness). The patient was confined to bed for a month and was administered corticosteroids. Keeping a good health, the young woman immigrated to Israel, got married and gave birth to three children.

At the age of 48, she was given accidentally halothane for a minor surgery. She felt malaise, vomited. A repeat hepatitis A, B, C study was negative.

In view of the redaction of the case report, the serology was duplicated. By now, the hepatitis A virus IgG was positive.

Discussion

The first episode (age 6): might be consistent with hepatitis A. But a second incident lacking the use of needles or blood components, or the report of hepatitis B in the neighborhood is not diagnostic. Thus, hepatitis A at age 6, followed by hepatitis B developing at age 13, is not probable. A healthy status till age 65, sustains the low chance of such an occurrence.

Most consistent is the recurrence of toxic hepatitis (toxicant-associated steatohepatitis – TASH).

Both the patient and her mother were submitted to intensive questioning that pointed out at a possible toxicant: a mild chronic exposure to benzene from petrol vapor introduced by the patient’s father, who directed a large service station.

Punctually, around both hepatitis episodes, we find the child exposed to a “pate-a-balloon”, a toy which contains x7-to-x9 times more benzene than is allowed, at least with most toy companies.

Formaldehyde exposure and respiratory symptoms

Abstract (Part two)

The patient displayed in the first part of the PPT, has now reached the age of 70 years, and she is at the center of the continuing case report. The corticosteroids employed at the age of 13 were very effective concerning the steatohepatitis. The young woman was symptomless until the age of 24. By then, and during her first pregnancy, she developed a paroxysmal dry cough, essentially nocturnal. The cough was recurrent, mainly in the winter and an attempt to associate it with the patient’s severe thoracolumbar scoliosis, with asthma, gastro-esophageal reflux or with chronic pertussis were vain. It is of note, that repeated lung function tests were within normal limits.

Case Presentation (Second part)

Starting with the patient’s first pregnancy, at the age of 24, she developed a severe, paroxysmal cough, mainly nocturnal and most striking during the winter. The differential diagnosis encompassed her severe scoliosis, gastroesophageal reflux, asthma, and chronic pertussis, but all the therapeutic attempts were of no avail.

A chest CT was negative, lung function tests were negative, twice. A PCR for Bordetella pertussis was also negative. Rarely, she showed evidence of laryngospasm.

Of note, an allergologist stated that her disease was in no way related with allergy, that, despite her well-known sensitivity to halothane, and diazepam.

The patient was disclosed as suffering of a moderate degree of obstructive sleep apnea syndrome, limited to the supine position; as shown by a study in a sleep laboratory. However, neither the patient nor his physicians ever related to this diagnosis.

The patient’s husband, an anatomo-pathologist has probably been in contact with various levels of formalin, as well as with VOCs. He might have carried back home some amounts of these chemicals on his skin, his hair and his clothes.

The patient's hypersensitivity may be due to an idiosyncrasy to a few chemicals.

Conclusions

Both aspects of the continuous history, display parallel features, and different aspects of the same dance. In the first part, her partner might have been her father, who introduced minor amounts of

benzene back home. However, the most significant amounts of the toxicant were related with the "pate-a-balloon".

Perhaps, the patient must wait several further years after her husband's retirement, before the levels of formalin and of the VOCs diminish significantly in such a way that will curtail the coughing almost completely.

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