CASE REPORT

A rare case of acute hepatitis induced by use of Babchi seeds as an Ayurvedic remedy for vitiligo

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SUMMARY

This case highlights that hepatitis is a potential side effect of Babchi seeds, an Ayurvedic remedy used to treat vitiligo. The patient, a 52-year-old Indian woman, presented with a 1 week history of jaundice, vomiting, pruritus and abdominal pain. Progressive deterioration in liver function prompted a liver biopsy which was consistent with the diagnosis of a drug-induced hepatitis. The hepatitis resolved after withdrawal of its use. A PubMed search found no previous UK cases and only two cases have been reported globally. This potentially serious side effect of a widely available substance is not acknowledged by manufacturers, and those purchasing the product are unaware of the risk of harm. To compound this risk, there is an absence of dosing advice or maximum recommended daily intake. It is important to ask about topical and oral herbal remedies in cases of acute jaundice as patients rarely perceive these preparations as 'medications'.

BACKGROUND

The patient developed acute hepatitis following oral and topical use of Babchi seeds as an Ayurvedic remedy for vitiligo.^{1 2} The use of Babchi seeds is well recognised in Ayurvedic medicine and other alternative medical systems. A simple search of the internet produces a myriad of websites citing the use of Babchi seeds as a natural and moreover safe cure for depigmentation of the skin.^{3 4} The product is also purported to have antioxidant effects and be helpful in reducing the symptoms of leucoderma, psoriasis, bacterial and fungal infections, osteoporosis, menopausal symptoms, depression, impotence and leprosy. The method of use varies; the seeds can be soaked (sometimes with the addition of ginger or turmeric) and the distillate can be drunk then refreshed daily. The seeds can also be dried into a powder which is mixed with oil and applied topically. No previous UK incidences were identified via a PubMed search of "Babchi seeds," "Bakuchi powder," "Bakuchiol" or "Psoralea Corylifolia." Two cases were identified globally, in Germany and Korea, respectively.^{1 2}

CASE PRESENTATION

The patient was a 52-year-old woman of Indian descent. She presented with jaundice, abdominal pain, lethargy, vomiting, pale stools and dark urine. There was a limited medical history including hypothyroidism, vitiligo and gastro-oesophageal reflux. The patient initially reported taking two medications, gaviscon and levothyroxine, and denied any recreational drug use, over the counter preparations and

rarely drank even minimal amounts of alcohol. She had not travelled abroad recently and had never received blood products. She was married, worked in a retail office environment, lived with her husband and children and denied new sexual partners, body piercings or tattoos. Additionally there was no personal or family history of liver disease. No previous allergies or adverse drug reactions were reported.

INVESTIGATIONS

Throughout her admission, examination was unremarkable except for marked jaundice. She was never encephalopathic. Initial investigations showed deranged liver function tests (LFTs). Alanine aminotransferase (ALT) levels were at their peak of 918 U/L at presentation and reduced over her admission. Bilirubin levels were 176 µmol/L at day 1, peaking at 426 at day 10 and normalising by day 33. Albumin levels remained within normal range throughout, but International Normalised Ratio (INR) was 1.2 on day 1, peaked at 1.6 on day 8 and reached 1.0 only at day 33.

Ultrasound of the abdomen showed normal abdominal anatomy with no ascites, patent vasculature and no evidence of chronic liver disease. There was no sign of biliary pathology. With deterioration in her LFTs she underwent a dual phase CT scan of her abdomen which also proved unremarkable. Further investigations included a full liver screen, with testing for hepatitis A, B, C and E, α fetoprotein, cytomegalovirus, Epstein-Barr virus, liver autoantibodies, as well as a metabolic screen including iron studies, copper and caeruloplasmin. All of these tests were negative. Progressive deterioration in her liver function prompted a liver biopsy (figures 1 and 2).

The liver biopsy showed a cholestatic acute hepatitis consistent with a drug-induced hepatitis.

The patient's history and specifically drug history had been reviewed with the patient three times. On the last occasion, she incidentally removed a white plastic tub of seeds from her bag while finding her medication list (figure 3). On direct questioning, the patient explained that recently she had started regularly using the seeds as a treatment for vitiligo. She explained that she had not thought of herbal remedy which carried no warning was a 'medication' and that it had not seemed relevant to her condition.

DIFFERENTIAL DIAGNOSIS

The early differential diagnosis included all causes of acute hepatitis including viral, autoimmune, drug induced, metabolic or alcoholic

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Figure 1 Gordon and Sweet's reticulin stain showing centrilobular collapse due to confluent hepatocyte death—seen here by the condensation of the 'chicken wire' pericellular pattern in the mid right of the image showing the overall liver architecture.

OUTCOME AND FOLLOW-UP

The patient stopped using Babchi seeds on admission and her ALT levels gradually normalised as did her bilirubin level. When seen in clinic 3 months later she had continued to avoid their use and her LFTs remained within normal limits.

DISCUSSION

The patient developed drug-induced hepatitis following oral and topical use of Babchi seeds as an Ayurvedic remedy for vitiligo. A number of issues are raised by this case.

In light of this case and the two previous case reports it should be recognised that acute hepatitis is a potential side effect of Babchi seeds and this should be advertised on packaging. While Donata *et al*⁵ reported that Babchi seed exposure resulted in no significant side effects the sample size was 10 and LFTs were not included in their biochemical monitoring for adverse reactions, thus hepatitis was unlikely to be captured in this study.

Second, there is little credible guidance on recommended dosage. One reference discusses a dosing range of 9–30 g/day but also elaborates that this is based only on custom rather than pharmacological testing.⁶ Formal dose testing is required to establish clear guidance.

Figure 2 Masson's trichrome stain showing a discrete dark pink circular area in the lower right of the image which is an acidophil body—this is a dying hepatocyte.

Figure 3 Babchi seeds, as found in a pot belonging to the patient.⁷

Third, this case highlights that during medical clerking a full drug history, exploring topical and oral use of herbal remedies, must be taken especially in the context of hepatitis.

Learning points

- ▶ This report highlights an unacknowledged potentially serious side effect of a widely available substance, one which is used by a population largely unaware of any risk of harm. Producers of these products should include warning labels that highlight the risk of hepatitis and recommend the seeking of medical attention if jaundice occurs.
- ▶ Further studies are needed in order to verify safe dosage levels, and this information should then be included on the packaging.
- ▶ A yellow card should be submitted to the Medicines and Healthcare products Regulatory Agency (MHRA) in instances of likely Babchi seed-induced hepatitis in order that safety concerns are highlighted.
- ▶ When clerking patients with hepatitis it is important to include questions regarding both oral and topical use of herbal remedies as patients often do not perceive them as 'medications'.

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REFERENCES

- 1 Teschke R, Bahre R. Severe hepatotoxicity by Indian Ayurvedic herbal products; a structured causality assessment. *Ann Hepatol* 2009;8:258–66.
- 2 Nam SW, Baek JT, Lee DS, *et al*. A case of acute cholestatic hepatitis associated with the seeds of *Psoralea corylifolia*. *Clin Toxicol (Phila)* 2005;43:589–91.
- 3 '22 best natural home remedies for vitiligo'. <http://home-cure.net/best-natural-home-remedies-vitiligo-leucoderma-treatment/> (accessed 22 Jul 2013).
- 4 'The Natural Vitiligo Treatment System'. <http://quickvitiligocure.com/vitiligo-cure/babchi-seeds-oil-vitiligo/> (accessed 22 Jul 2013).
- 5 Donata, Kesavan M, Austin, *et al*. Clinical trial of certain ayurvedic medicines indicated in vitiligo. *Anc Sci Life* 1990;9:202–6.
- 6 'Psoralea Corylifolia'. <http://examine.com/supplements/Psoralea+Corylifolia/#summary2-1> (accessed 22 Jul 2013).
- 7 Babchi seed image. <http://kiswahexports.com> (accessed 9 Jun 2014).

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