



Figure 2 Sequence chromatogram showing the heterozygous deletion c.2315_2318delAGAC in the proband. DNA and corresponding amino acid sequences of wild type and mutant *PTCH1* alleles are also shown. Arrow in the mutant allele indicates the deletion point, and bold letters indicate the sequence after the deletion point.

3 years of follow-up, new lesions appeared on the trunk and acral regions, with acrochordon-like lesions on the neck (Fig. 1c).

Suspecting naevoid BCC syndrome (NBCCS), we performed a complete molecular analysis of the *Patched 1* gene (*PTCH1*), sequencing both strands of all exons and flanking intronic fragments, and visualizing the sequences by capillary electrophoresis (Fig. 2). A frameshift mutation c.2315_2318delAGAC in exon 15 of the *PTCH1* gene was found. This mutation shifts the framework from codon 772, which causes a stop codon at position 1004 (p.R772RfsX232), resulting in loss of protein function. Genetic studies of both parents and the patient's sister were negative, suggesting that this is a sporadic mutation.

In 1996, two reports described germline mutations in the *PTCH* gene in patients with NBCCS.^{1,2} Since then, around 300 different mutations have been reported, the majority being frameshift or nonsense mutations. Many of the reported cases are sporadic, emphasizing the high frequency of spontaneous mutations in the *PTCH1* gene.²

NBCCS or Gorlin syndrome is an autosomal dominant condition characterized by the early onset of multiple basal cell carcinomas (BCC), usually between the first and second decades of life, mandibular odontogenic cysts, palmar or plantar pits, skeletal abnormalities, ectopic calcifications, facial dysmorphism, and a predisposition to other malignancies such as medulloblastomas, meningiomas, ovarian tumours, cardiac fibromas and fibrosarcomas.

A germline mutation in the *PTCH1* gene, located on chromosome 9q22-31, is responsible for NBCCS. No description exists of a consistent correlation between genotype and phenotype in patients with NBCCS;¹ there is great variability in the clinical presentation, even within members of the same family with the same genetic mutation.^{3,4} Environmental exposure and other modifier genes may contribute to this variability. Therefore, different mutations of *PTCH1* do not seem to offer prognostic information about age at onset of BCC, or the number of carcinomas that will develop.⁵

In conclusion, we present a previously undescribed spontaneous mutation in exon 15 of the *PTCH1* gene in a girl with striking skin symptoms of multiple BCCs since birth. Future research will confirm or exclude the relationship between genotype and phenotype in patients with NBCCS.

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Conflict of interest: the authors declare that they have no conflicts of interest.

Accepted for publication 4 November 2013

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Contact urticaria from beer

doi: 10.1111/ced.12289

We describe a patient with occupational contact urticaria (CU) on the hands after contact with beer. Beer is a popular alcoholic beverage. Despite its high consumption, only a few cases of type I hypersensitivity, including urticaria, angio-oedema or rarely anaphylaxis, occurring after drinking beer have been reported.^{1–3} Here we report a patient with occupational CU on the hands after contact with beer.

A 20-year-old woman reported recurrent episodes of weals on her hands and forearms after contact with beer while working in a bar. The weals appeared within 15 min, and disappeared within a couple of hours. However, the patient could drink beer without any reaction. Her medical history included atopic dermatitis and seasonal rhinoconjunctivitis.

Skin-prick tests with wheat flour and beer, and specific IgE measurements for inhalation allergens and cereals (ImmunoCAP, Phadia AB, Uppsala Sweden) were carried out (Table 1). The tests were negative for wheat flour, and strongly positive (3+; 12 × 4 mm weal) for beer. Ten controls tested negative on the skin-prick test with the beer. We also performed a provocation test with the same beer; the patient was asked to hold a container of beer, and within 15 min, weals developed on her hand and wrist (Fig. 1).

Skin-prick tests were positive for beer and negative for wheat flour. Specific IgE antibodies were detected against house dust mite, cat and dog dander, grass pollen, barley and malt (Table 1). Lower levels of specific IgE antibodies were detected against wheat, rye and oats. The latter can be explained by crossreactivity between wheat and grass pollen, and between different cereals. The patient was able to consume wheat, rye and oats without any reaction. Beer is generally made of malted barley, hops, brewer's yeast and water. There is one previous case report describing a patient with CU from beer.⁴



Figure 1 Wrist of patient after 15 min of contact with beer; in addition to her atopic eczema, discrete urticaria can be seen.

Table 1 Results of the specific IgE measurements.

Allergen	Specific IgE, kU/L*
House dust mite	> 100
Grass pollen	40.8
Birch pollen	0.1
Mould/yeast mix	0.3
Mugwort	0.2
Cat dander	36.5
Dog dander	35.1
Wheat	0.7
Malt	5.13
Barley	4.33
Rye	0.46
Oats	0.41
Corn	0.10
Rice	0.07

*The test used was ImmunoCAP (Phadia AB, Uppsala, Sweden); a score of > 0.35 kU/L was considered positive.

The underlying mechanism in the development of CU from beer is not known. The disrupted skin barrier in our patient due to her eczema might have made her skin more susceptible to develop the CU. Mechanisms involved in the development of CU can be nonimmunological or immunological. The positive skin prick test for beer and the presence of specific IgE antibodies for barley and malt in our patient points to an immunological mechanism in the beer-related CU.

Generalized urticaria after drinking beer is thought to be due to hypersensitivity to the plant pan-allergen lipid transfer protein from barley.⁵ Occupational CU from beer, without symptoms after drinking, seems to be rare, and might be caused by differences in end-organ sensitivity. However, it is possible that the phenomenon is under-reported.

Acknowledgement

We thank Dr André C Knulst from the University Medical Centre Utrecht for his useful comments.

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Conflict of interest: the authors declare that they have no conflicts of interest.

Accepted for publication 13 November 2013

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