Blepharitis: a rare side effect related to cetuximab in patient with colorectal cancer

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DESCRIPTION

Molecular targeted agents have emerged as an important part of systemic therapy for many cancer types. Cetuximab is a recombinant human/mouse chimeric monoclonal antibody which competitively inhibits the binding of epidermal growth factor (EGF) and other ligands were approved for metastatic colon cancer in 2004.¹ Skin toxicity is the most important side effect of cetuximab administration, but blepharitis as ocular toxicity was reported in <1%, post-marketing and/or case reports.²⁻⁵ A 61-year-old woman due to lack of proper health surveillance presented with complaints of abdominal pain and bloody stools. CT scan showed 4.2×3 cm mass at the gastric antrum/pylorus, 2.8×1.7 cm polypoid mass near the transverse colon. It also showed multiple large hypodense lesions in the liver. Subsequently, a liver biopsy confirmed metastatic adenocarcinoma favoured to represent colonic primary based on immunostains (positive for CDX2, CK 20 and negative for SATB2). There was no evidence of mismatch repair deficiency. KRAS and BRAF mutation was not detected. Status post 10 cycles of FOLFIRI (5-fluorouracil, leucovorin and irinotecan) plus cetuximab treatment patient developed inflammation of the eyelid margin associated with eye irritation (figures 1 and 2). Cetuximab was held, and she was treated with topical antibiotics and her clinical signs and symptoms of blepharitis have resolved. The two classes of molecular targeted agents associated with blepharitis are the EGF receptor inhibitors and the proteasome inhibitor (like bortezomib). Severe blepharitis has been implicated as an adverse event of bortezomib and is often refractory to conservative treatment requiring oral antimicrobials like doxycycline.⁶ A cetuximab-related ocular side effect is rare, and the pathogenesis is not clearly established. Meibomian glands are the sebaceous glands of the eye that secrete tears, similar to the sweat gland apparatus of the

Figure 2 With raised eyebrows, picture depicting inflammation of the eyelid margin associated with eye irritation more clearly.

Learning points

- ▶ Blepharitis is a rare but known side effect of cetuximab.
- ▶ The two classes of molecular targeted agents associated with blepharitis are the epidermal growth factor receptor inhibitors and the proteasome inhibitor.
- ▶ The mild cases of eye toxicity may be controlled with conservative approach, but severe cases will require collaboration with ophthalmologist.

skin. Previous case reports have hypothesised that cetuximab targets the EGFR-expressing cells of meibomian glands and may consequently lead to altered secretive function.⁷ The mild cases of eye toxicity may be controlled with the conservative approach, but severe cases will require collaboration with an ophthalmologist.⁸ Epithelial defects are reversible with cessation of treatment and the decision to continue therapy must be individualised taking into account the risks and the availability of alternative treatments.⁹ Treating physicians should maintain a high degree of caution and monitor for such rare toxicities in patients on EGFR inhibitors.

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Figure 1 Picture depicting inflammation of the eyelid margin associated with eye irritation.

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