



# Spontaneous nasal septal perforation due to Bevacizumab

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## Abstract

Bevacizumab is a growing monoclonal antibody agent in oncology. Nasal septum perforation due to bevacizumab is rare. It is generally more common in patients receiving high doses of bevacizumab and who are using taxane. In the treatment of nasal septal perforation, bevacizumab treatment interruption, nasal hygiene, antibiotics, local irrigation or observation are recommended.

Received: Oct 18, 2019

Accepted: Jan 28, 2020

Published Online: Jan 30, 2020

Journal: Journal of Case Reports and Medical Images

Publisher: MedDocs Publishers LLC

Online edition: <http://meddocsonline.org/>

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**Keywords:** Bevacizumab; Spontaneous nasal septal perforation

## Case Report

In addition to advances in cancer screening and diagnosis, agents that have proven to be effective on tumor response, total survival and progression-free survival in recent years have been used alone or in combination with other chemotherapy regimens. Particularly, the emergence of new biological therapies targeting epidermal growth factor receptor signaling or angiogenesis has contributed to the prolongation of survival. Among the treatments targeted for angiogenesis, the most important and widely used drug is bevacizumab, a monoclonal antibody directed to vascular endothelial growth factor (VEGF) [1].

Bevacizumab is a humanized monoclonal IgG1 antibody that recognizes all isoforms of VEGF-A and has anti-VEGF activity. The first malignancy in which the efficacy of anti-VEGF treatment has been demonstrated is colorectal cancers. In addition, glioblastoma is used in the treatment of malignant mesothelioma, soft tissue sarcomas, primary peritoneal cancer, lung, cervical, endometrium, ovary, fallopian tube, breast and renal cell carcinoma. Although Bevacizumab is a well-tolerated drug, some patients have side effects. Side effects such as gastrointestinal perforation, stomatitis, diarrhea, thrombosis, hemorrhage, hy-



pertension, proteinuria, hypertension and delay in wound healing are available [1-4].

Recently, cases of nasal septum perforation due to bevacizumab use in lung, breast, ovary and colorectal cancer have been reported. In a study of 100 patients with metastatic colorectal cancer treated with bevacizumab, Ramiscal et al reported the incidence of nasal septal perforation as 1% [5]. Mailliez and colleagues reported that the rate of nasal septal perforation was 7% in patients with breast cancer who received bevacizumab [2]. Due to the antiangiogenic effect of bevacizumab, it can decrease vascularization by affecting vascularization of nasal septum. This may lead to ulceration, bleeding and nasal septum perforation in the mucosa [1-3]. Although there are case reports of nasal mucosa toxicity of bevacizumab, there are a limited number of clinical studies in the literature to date. Rodriguez et al. reported a 34-year-old woman with metastatic breast cancer (hormone sensitive, HER-2 / neu negative), who developed nasal septum perforation during paclitaxel and bevacizumab [1]. Geltzeiler and colleagues received topical moisture therapy for a 59-year-old patient who presented with anterior septal perforation while receiving bevacizumab for ovarian cancer. After a few weeks, the bevacizumab was resumed after the perforation remained stable. They concluded that bevacizumab may be associated with both septal perforation and more common sinonasal toxicity and conservative approach to treatment [3]. In a study by D'Amico et al. in 47 patients receiving bevacizumab, nasal mucosal lesions were detected in 45 patients (96%). Erosion was observed in 30% of them, grade 1 - 2 epistaxis in 62%, and nasal septal perforation in one patient. It has been reported that the incidence of these side effects is higher in patients with high-dose bevacizumab and accompanying taxane use [4].

## Conclusion

As a result, Bevacizumab is a growing monoclonal antibody agent in oncology. Nasal septum perforation due to bevacizumab is rare. It is generally more common in patients receiving high doses of bevacizumab and who are using taxane. In the treatment of nasal septal perforation, bevacizumab treatment interruption, nasal hygiene, antibiotics, local irrigation or observation are recommended.

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