Immune checkpoint inhibitors are a mainstay of treatment for a range of cancers, including melanoma, squamous cell carcinoma, non-small cell lung cancer and Hodgkin's lymphoma. These drugs work by disinhibiting host immunity to help target tumors, but consequently, this can lead to immune related adverse effects. Check point inhibitor colitis is a well described complication involving the gastrointestinal tract, but gastric involvement is a rare occurrence. In this unusual case, we report endoscopic and histologic findings consistent with hemorrhagic gastritis in a patient treated with pembrolizumab, an anti-PD-1 immunomodulator. The patient presented with subacute and overt evidence of gastrointestinal bleeding and was hospitalized for symptomatic anemia requiring multiple blood transfusions. Upper endoscopy showed slow hemorrhaging from multiple focal punctate lesions located diffusely throughout the gastric body and antrum. Biopsies of these areas showed histology consistent with chronic inactive gastritis. A diagnosis of checkpoint inhibitor-induced hemorrhagic gastritis due to pembrolizumab therapy was made, after which the patient was started on steroids with marked improvement.