A Very Rare Cause of Bicytopenia; The Use of Vitex Acnu Castus

ABSTRACT

Vitex Agnu Castus dry extract BNO 1095 is used in many indications, mainly premenstrual syndrome. Nausea, headache, acne, etc. are the main side effects. The use of BNO 1095 was learned from the history of a 27-year-old female patient who was examined for bicytopenia etiology. Serological tests results were within normal limits and the bone marrow biopsy clonality result suggested that this might be related to non-neoplastic autoimmune processes. The response to methylprednisolone treatment was accepted as a finding supporting this result. Although there are many reasons in the etiology of bicytopenia, the use of herbal medicine should always be considered. This is the first case in the literature demonstrating that this herbal medicine causes bicytopenia.

Keywords: Bicytopenia, casticin, vitex agnu castus

CASE

A 27-year-old female with no known chronic disease presented hospital with the complaints of weakness. The laboratory test results revealed bicytopenia: Leukocyte: 920/µL, neutrophil: 100/µL, hemoglobin: 10.6 g/dL, MCV: 68 fl, platelet: 211,000/µL. The patient was hospitalized for further examination. There were no B symptoms. Drug and herbal substance use was questioned and the patient reported having used BNO 1095 (generic name Agnucaston), which is a preparation of the dry extract of Fructus acnu casti for accessory breast, for 3 months and most recently 1 month ago.

Anemia parameters were within normal limits: Vitamin B12: 231 ng/L, folat: 4.8 ug/L, ferritin: 72 ug/L. A peripheral blood smear was taken and evaluated. Anisocytosis was determined in the red blood cell morphology, leukocyte count compatible with complete blood count, and no atypical cells were seen. Viral hepatitis markers, TORCH panel, brucella, ANA,
findings observed in the bone marrow primarily suggest that the
increase in clonal cytotoxic T cells on a polyclonal basis may be associated with non-neoplastic autoimmune processes ".

As a result of bone marrow clonality, the methylprednisolone dose was reduced and then discontinued. The patient remains under follow-up and the hemogram parameters are completely normal.

DISCUSSION
Over the last 50 years VAC has been used especially for the treatment of premenstrual syndrome and prevention of premenstrual mastalgia (5).

In a systemic review by Danielle et al. on the side effects of VAC treatment; the most commonly seen side effects were reported to be nausea, headache, gastrointestinal disturbances (nausea, vomiting, pressure sensation in the epigastric region, etc.), menstrual disorders, acne, itching and erythematous rash and these were seen to often be reversible (2).

Casticin is a potent immunomodulator and cytotoxic compound for which chemiluminescence, chemotaxis, T cell proliferation and cytotoxic activity have been tested in vitro. There has been reported to be a significant dose-dependent inhibitory effect on monocyte oxidative burst (6).

Casticin; decreases neutrophil, macrophage, and lymphocyte counts, proinflammatory cytokine and chemokine levels. It also significantly reduces the thickness of the epithelium and its infiltration by inflammatory cells (4).

Röhrl et al., (7) showed that VAC dry extract BNO 1095 targets uterine myometrial tissue and inflammatory signaling molecules asso-
Associated with migratory / inflammatory cells. The same study also reported that BNO 1095 has a promising anti-inflammatory effect in vitro conditions through the strong inhibition of 5-lipoxygenase activity and leukotyrene production and reduction of the production of inflammatory cytokines and reactive oxygen derivatives.

The patient presented in the paper had used fructus agnu casti extract and the result of the bone marrow biopsy clonality suggested that it may be related to autoimmune processes. The hemogram parameters returned to normal in a short time after discontinuation of the extract, suggesting that this event was related to this extract.

The assessment of causality between fructus agnu casti extract and bicytopenia using the Naranjo nomogram questionnaire yielded a score of 5, indicating that the side effect probably caused which means side-effect is probably caused by the fructus agnu casti extract (Table 1) (8).

The aim of presenting this case was to emphasize that patients who are investigated for cytopenia should be questioned about the use of herbal substances in addition to medications and the possible side-effects of herbal products should be considered. This case also provides an example of the effectiveness of steroid therapy in the treatment of cytopenias triggered by autoimmunity.

There are no previous cases in the literature that this preparation causes bicytopenia. So this case report can be considered important due to its rarity and clinical significance.

Informed Consent: Written informed consent was obtained from the patient for the publication of the case report and the accompanying images.

Peer-review: Externally peer-reviewed.

**REFERENCES**