

Skin Reaction on Face Following the Use of  
Cloves (*Syzygium aromaticum*)Samir El Mazouz<sup>1</sup>, Abdelmoughit Echchaoui<sup>1\*</sup>, Narjis Badrane<sup>2</sup> and Majda Askour<sup>3</sup><sup>1</sup>Department of Plastic Surgery and Burns, Ibn Sina University Hospital, Mohamed V University, RABAT 10000, Morocco<sup>2</sup>Department of Poison Control and Pharmacovigilance Centre of Morocco, Rabat 10000, Morocco<sup>3</sup>Department of Dermatologie-Venerology, Ibn Sina University Hospital, Mohamed V University, RABAT 10000, Morocco

## Article Information

Received date: Aug 02, 2017

Accepted date: Aug 17, 2017

Published date: Aug 21, 2017

## \*Corresponding author

Abdelmoughit Echchaoui, Department of Plastic Surgery and Burns, Ibn Sina University Hospital, Mohamed V University, RABAT 10000, Morocco, Tel: +212616595958; Email: e.moughit@hotmail.fr

Distributed under Creative Commons CC-BY 4.0

**Keywords** Cloves; *Syzygium aromaticum*; *Eugenia caryophyllata*; Eugenol; Allergic reaction

## Case Report

Clove (*Syzygium aromaticum*) (Figure 1) is a plant-derived spice that has been traditionally used for centuries as food preservative and as medicinal plants [1].

The anti-inflammatory, antioxidant and bactericide activities of clove are mainly due to its major components, which is the eugenol with a concentration rate ranging from to (77-95%) [2,3].

Clove is generally safe when taken in foods in lower concentrations [4], however, it is not recommended as a topical application on skin due to insufficiency of safety and toxicity data [5]; it was found to be highly cytotoxic for human fibroblasts and endothelial cells [6] leading to allergic skin reactions (burning, hives, itching, irritation, rash...), ulcer formation and/or tissue necrosis [7].



Figure 1: Clove (*Syzygium aromaticum*).



Figure 2: An allergic skin reaction on left hemiface.

We report a case of a 39-year-old female patient in good overall health presented with allergic skin reaction on her face following the use of mixture (cloves and water) for an aesthetic purpose.

Physical examination showed an allergic skin reaction on her left hemi face (Figure 2), homogeneous, without edema or skin necrosis.

The lesion was successfully treated with topical application of betasitosterol daily for ten days.

## References

1. Pulikottil SJ, Nath S. Potential of clove of *Syzygium aromaticum* in development of a therapeutic agent for periodontal disease. A review. SADJ. 2015; 70: 108-115.
2. Pandey SK, Tandon S, Ahmad A, Singh AK, Tripathi AK. Structure-activity relationships of monoterpenes and acetyl derivatives against aedes aegypti (diptera: culicidae) larvae. Pest Man Sci. 2013; 69: 1235-1238.
3. Vanin AB, Orlando T, Piazza SP, Puton BMS, Cansian RL, Oliveira D, et al. Antimicrobial and antioxidant activities of clove essential oil and eugenyl acetate produced by enzymatic esterification. Appl Biochem Biotechnol. 2014; 174: 1286-1298.
4. Cortés-Rojas DF, de Souza CRF, Oliveira WP. Clove (*Syzygium aromaticum*): a precious spice. Asian Pac J Trop Biomed. 2014; 4: 90-96.
5. Nataly M. Cloves. J Prim Health Care. 2015; 7:163.
6. Prashar A, Locke IC, Evans CS. Cytotoxicity of clove (*Syzygium aromaticum*) oil and its major components to human skin cells. Cell Prolif. 2006; 39: 241-248.
7. Sarrami N, Pemberton MN, Thornhill MH, Theaker ED. Adverse reactions associated with the use of eugenol in dentistry. Brit Dent J. 2002; 193: 257-259.