

# 1 case report

2 **Running Title:** Eucalyptus and spruce oil

## 3 **Allergic contact dermatitis caused by both eucalyptus oil and spruce oil**

### 4 **Abstract**

5 Infantum cold® (Sedomed İlaç Pazarlama-Konya-Turkey) is an inhalant ointment that  
6 helps to relieve nasal congestion due to upper respiratory tract infections. It contains only  
7 eucalyptus oil and spruce oil. Although many reports present allergic contact  
8 dermatitis(ACD) due to eucalyptus oil and spruce oil separately there are no cases caused by  
9 both oil. We present a case of a pediatric patient who developed an ACD secondary to  
10 application of Infantum cold®.

### 11 **Introduction**

12 Infantum cold® (Sedomed İlaç Pazarlama-Konya-Turkey) is an inhalant ointment that helps  
13 to relieve nasal congestion due to upper respiratory tract infections. Nowadays it is  
14 prescribed frequently to children for the reason that it's not a systemic treatment. It contains  
15 only eucalyptus oil and spruce oil. It is applied on the sweat collaret

16 Although many reports present allergic contact dermatitis(ACD) due to eucalyptus oil (1-7)  
17 and spruce oil (8) separately there are no cases caused by both oil. We present a case of a  
18 pediatric patient who developed an ACD secondary to application of Infantum cold®.

### 19 **Case**

20 A 8 year-old girl presented with a 3 day history of erythematous lesions on her neck. Her  
21 history showed that these lesions appeared 1 day after the use of an inhalant ointment. She  
22 had been applying it every night on her pyjamas' collarets. Her examination revealed sharp  
23 bordered erythematous macular lesion on her neck and upper chest(Figure1). Patch testing

was performed with the European baseline series from Chemotechnique Diagnostics (Malmö, Sweden). Finn Chambers® (8 mm; SmartPractice®, Phoenix, AZ, USA) on Scanpor® tape (Norgesplaster A/S, Vennesla, Norway) were used. Patient was also patch tested with eucalyptus and spruce oils separately.

The occlusion period was 48 hours. The initial reading was half an hour after the removal of the patches. A second reading was done at day D4 according to the ICDRG guidelines. No reactions were seen to the European baseline series components. A ++ reaction was noted with the spruce oil and +++ reaction with the eucalyptus oil. Both eucalyptus and spruce oils were tested in the same way in 3 healthy controls, with negative results.

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#### 34 **Discussion**

During the recent years, inhaler ointments have become popular and are widely available in Turkey. Most of the ointments contain eucalyptus and spruce oils. Rudzki et al. reported multiple sensitivity to essential oils used in cosmetics for the first time in 1976 (1). Nowadays essential oils in cosmetics causing allergic contact dermatitis is well known. 4 cases of contact dermatitis caused by eucalyptus plant (5), Vicks VapoRub (6) or aromatherapy (4,7) with eucalyptus and only one case of occupational allergic contact dermatitis due to spruce sawdust(8) have been reported on PubMed.

We believe that ACD due to eucalyptus oil and spruce oil might be more common than currently described in the literature. We encourage others to test with eucalyptus oil and spruce oil if there is clinical indication.

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83 **Figure Legend:**

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85 Figure 1: Sharp bordered erythematous macular lesion on her neck and upper chest.