**Evaluation of allergic vesicular reaction to patch test using in vivo confocal microscopy.**


**ABSTRACT**

**BACKGROUND:** Confocal microscopy has been successfully applied both in oncologic and inflammatory diseases. In particular, it has been proved as a useful tool for the in vivo detection of microscopical changes occurring in allergic reactions.

**AIMS OF THE STUDY:** To evaluate microscopic changes occurring in positive patch test reactions.

**METHODS:** Eight patients with history of allergic dermatitis and positive patch test reaction were analysed by means of confocal microscopy. **RESULTS:** Confocal microscopy showed the presence of spongiotic vesicle preferentially localized around the adnexal ducts that appeared to be in the middle of the spongiotic phenomena.

**CONCLUSION:** Confocal microscopy offered for the first time new insight into vesicle formation and development, showing that adnexal ducts can play a role in allergic reaction.