



## INTRODUCTION

- Frictional dermatitis occurs when a physical frictional force on the skin contributes to the onset of dermatitis.
- It has been reported in children as “pool palms” after swimming in pools and as “computer palm” and “PlayStation thumb” after continuous computer use and video game play, respectively.
- We describe a patient who suffered from frictional dermatitis following a one-time prolonged physical interaction with a touch screen.

## CASE PRESENTATION

- An otherwise healthy 10-year-old girl presented with painful erythematous, edematous plaques and macules on the fingertips after playing at an arcade.
- She has no history of skin disease including hyperhidrosis or bullous disorders.
- She played “Fruit Ninja”, a game in which a continuous, rapid, and pressurized contact between the fingers and a touchscreen is needed to win. Players slide their fingers repeatedly across a large glass touchscreen in a swiping motion back and forth.
- Her fingers were dry and clean before playing. She played the game multiple rounds in a row, totaling about 45 minutes of interaction with the touchscreen.

## CASE PRESENTATION CONTINUED

- Within thirty minutes of finishing, the girl noticed painful tender skin on the fingertips accompanied by a burning sensation.
- After 24 hours, the clinical appearance of the fingertips was noticed as shown in Figure 1. The patient’s symptoms resolved after one week with avoidance of the touchscreen video game.

## DISCUSSION

- Frictional dermatitis usually occurs in the hands or feet owing to repeated activities that involve friction, pressure, or trauma on the skin
- Most cases reported in the literature involve children. It is hypothesized to be a result of the fragility of their skin and their inclination to rub against rough surfaces.
- In children, frictional dermatitis most often develops after swimming pool use as children will repeatedly use their feet or hands to push off the rough surfaces of the pool.
- There is growing literature of frictional dermatitis occurring in people who spend prolonged periods on computers or video games due to repeated contact with devices such as mouse or videogame controllers. Contact between their hands and the surfaces of technological devices such as mouse or PlayStation handles causes the dermatitis.
- Ghasri et al. identified 22 cases of dermatitis due to prolonged computer use. Nine of those cases were identified to be friction-induced dermatoses



## DISCUSSION

- A common hallmark in most cases of frictional dermatitis is the long duration of exposure.
- For example, pool palms presented after days of continuous swimming pool use.<sup>2</sup> Patients diagnosed with computer palms were using the computers for at least 10 hours a day for 20 years.
- What is unique in this case, however, is the development of the frictional dermatitis after a one-time incidence as opposed to the more common presentation of longer and repeated periods of contact