

Perioral petechiae and pulmonary haemorrhage, thinking outside the vacuum

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DESCRIPTION

A 3-month-old boy presented to the children's emergency department with respiratory distress, haemoptysis, and perioral petechiae ([figure 1](#)). He was pale and floppy, with tachypnoea, hypoxia (SpO₂ 84%), bilateral crepitations, and wheeze. His white cell count was mildly elevated ($20.5 \times 10^9/L$), and a chest X-ray (CXR) showed ([figure 2](#)) bilateral air-space opacification; a non-specific finding with differentials including oedema, infection, or haemorrhage.

His older brother subsequently admitted to holding a vacuum cleaner nozzle against his mouth, confirming the mechanism of injury and diagnosis of pulmonary haemorrhage. He required a short period of oxygen therapy and overnight admission. A thorough assessment revealed no social concerns and a repeat CXR 2 days later had improved.

A MEDLINE keyword search was completed using the following terms: "(vacuum cleaner* or hoover* or household vacuum*) adj10 (injur* or h?emoptysis or h?emorrhage*)". It revealed four relevant articles reporting 13 cases of vacuum cleaner inflicted hand

burns in children and 2 auto-stimulation penile injuries in adolescents.¹⁻⁴ There were no acute lung injuries reported.

For most households, a domestic vacuum cleaner is an essential appliance frequently used by both parents and children and actively promoted as a comforter. To date, injuries have been relatively minor. We present the first case of severe and potentially life-threatening acute lung injury from this appliance.

Learning points

- ▶ Paediatricians, manufacturers, and parents should be aware of the risk of vacuum cleaner inflicted pulmonary haemorrhage in young children.
- ▶ Manufacturers should display a child safety warning on vacuum appliances.
- ▶ Parents should keep vacuum appliances out of reach of children to reduce risk in the home.

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Figure 1 A 3-month-old boy with circular petechiae around his mouth, caused by application of a domestic vacuum cleaner.



Figure 2 CXR of a 3-month-old showing diffuse bilateral air-space opacification, in-keeping pulmonary haemorrhage inflicted by perioral application of a domestic vacuum cleaner.



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