bone may be bilateral and multiple but there is usually other
evidence of fracture or haematoma. This new bone is uneven
and extends to the end of the metaphysis in some cases. In
infection new bone will not affect multiple bones symme-
trically. Physiological periostitis should be considered in
suspected bone injury with periosteal reaction only in infants
aged 1–6 months.3

Conclusion
These two children were initially incorrectly suspected of
having been abused, the appearances of physiological
periostitis being mistaken for a fracture until a radiograph
on the opposite side showed identical appearances leading to
the recognition of physiological periostitis (or periostial new
bone).

These two case reports highlight firstly, the importance of
imaging the contralateral limb in this age group when
accidental fracture or osteomyelitis is suspected in order to
avoid unnecessary skeletal survey, and secondly, radiological
findings must be interpreted in the context of clinical
findings so that the risk of serious errors including erroneous
suspicion of child abuse are minimised.

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IMAGES IN PAEDIATRICS

Home oxygen therapy: beware of birthday cakes

The remains of the burnt oxygen
nasal cannula belonged to a child
with chronic lung disease on home
oxygen therapy (HOT). He had always
celebrated his birthdays with the usual
cake and the appropriate number of
candles. Admiring his fourth birthday
cake, he lost balance and came too close
to the candles. The nasal cannula went
up in flames. His hair too. His older sister
was cute enough to rip the cannula off his
head. Physically, he only suffered from
nasal second degree burns. His family feels
guilty, even more so since everyone knew
that oxygen was a combustive agent.

Only adult patients have been
reported in the literature to have
suffered from HOT induced burns,
which varied from small superficial
facial lesions to lethal inhalation
injuries.1 Most of these incidents were
cased by cigarette smoking. Young
children, luckily, do not normally
smoke. They are thus probably less at
risk of oxygen induced burns.

When prescribing HOT to paediatric
patients, physicians should however
remember children’s pleasures: birthday
cakes and candles—and warn parents
accordingly.

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1 Chang TT, Lipinski CA, Sherman HF. A hazard of
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