(See page 56)

Part one

1. All of them are causes of extensive soft tissue swelling. However all but the last (h) are associated with illness: Jonas is clearly not ill, and there is no other evidence or suggestive history of fluid retention. The sudden onset after an injury to the chest, the fact that the swelling does not involve the hands and feet (air is unlikely to pass through the wrist and ankle), and the absence of acute illness strongly suggests subcutaneous emphysema.

Part two

2. (b), (c), and (d). Tomography showed a much-reduced left lung shadow and two broken ribs. His oxygen saturation was 96%, which showed that he had good residual lung function. The diagnosis was haemopneumothorax with subcutaneous emphysema. The air escaping through the chest wall into the subcutaneous space prevented him from developing a life-threatening tension pneumothorax.

Part three

3. (a,) (b), (c), and (d) are all possible causes of the picture presented by Jonas, occurring after surgery, or rarely after positive pressure respiration in the unconscious patient. Renal failure and heart failure do not give this combination of symptoms.

Part four

4. None of them! (a) is a serious mistake to make, but it is all too easy to discount a patient's description of past trauma experience when occasionally it can be of extreme relevance. As for answer (b) Jonas noticed his ankle swelling first because it was so obvious, but he had missed the swelling of the torso because there was so much more tissue to take up the air.

Part five

5. All of them. A chest drain was inserted to remove the extra-pulmonary air and to re-inflate the lung; X-rays were used to monitor the lung progress and to ensure the drain was correctly placed; oxygen saturation and cardiac signs were monitored to ensure that he did not deteriorate. Analgesics eased the chest wall pain, and an antibiotic given to cover possible infection from the drain. As for the excessive air in the tissues, that resolved naturally over the next 2 weeks.

Advertisement Enquiries

Please find below the email addresses or websites of our advertisers

Advertiser	Page number	Email address/website
Beckman Coulter	14	rschlodder@beckman.com
Crown Agents	IBC	www.crownagents.com
GlaxoSmithKline	29	www.gsk.com
Going International	26	www.goinginternational.eu
Hemocue	8	www.hemocue.com
HMD Healthcare Ltd	19	www.hmdhealthcare.com
Informa (Africa Health, Johannesburg)	19	www.africahealthexhibition.com
Laureate International Universities	2	www.ohecampus.com
MMV (Medicines for Malaria Venture)	24	www.mmv.org
Sanofi Aventis	BC	ayesha.mathuthu@sanofi-aventis.com
Schiller	IFC	www.schiller.ch
Siemens	6	derrick.diamini@siemens.com
Sonosite	4	www.sonosite.com/africa@sonosite.com
World Medical Association	54	julia.seyer@wma.net
University of Nottingham	22	www.nottingham.ac.uk