

**(Refer to page 87)**

**Answer: Self-modifications of plaster casts**

The images shown are of cases where the patients had modified their casts that had been applied for various reasons. The common reasons given for modifications included itching, difficulty in writing, eating or working and the plaster getting wet. Although these modifications may not have any impact on the final outcomes, self-modifications or removal of plaster cast can cause problems such as skin injury, displacement of fracture, re-rupture of tendon or improper healing of soft tissue injury.

Immobilisation of the injured part with a plaster splint or cast is beneficial in a variety of conditions ranging from soft tissue injuries to fractures, including inflammatory conditions and tendon injuries. Complications of cast or splint immobilisation are also well recognised. These include compartment syndrome, thermal injuries, pressure sores, skin infection, dermatitis, joint stiffness and neurological injury.<sup>1</sup>

The true incidence of self-removal or modifications of cast is not known. In a retrospective study of emergency room visits by paediatric patients who had fractures treated with cast immobilisation, 29% attended because of a wet cast, 23% because of a tight cast, 13% because of a loose cast and 10% each for damaged cast or pain. Significantly higher rates of return to the emergency room



**Panels: (Top) the bottom part of plaster cast under the sole has been removed and (bottom) the plaster cast has been split and held in place using a rope.**

were noted for hand casts and long arm and leg casts. These patients needed reassurance or a change of cast.<sup>2</sup>

Patient education is important after application of cast or splint to detect possible complications early and take appropriate steps. Patients are also routinely advised against altering or removing the plaster on their own.

**From page 90: a) Plaster cast split below the elbow, b) part of below elbow plaster cast removed around the thumb to allow movement c) long leg plaster cast split above the knee joint.**

**REFERENCES**

- 1:** Boyd AS, Benjamin HL, Asplund C. Principles of casting and splinting. *Am Fam Physician* 2009; 79:16-22.
- 2:** Sawyer JR, Ivie CB, Huff AL, et al. Emergency room visits by pediatric fracture patients treated with cast immobilization. *J Pediatr Orthop* 2010; 30:248-52.