Finger Imaging by RadioVisioGraphy Digital Dental Radiography Imaging System

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Currently, finger injuries are very common in young adults and children due to sports, minor road accidents, falls, personal violence, and accidents at the workplace and home. Fracture and dislocations of finger bones are obvious on plain radiographs. The role of radiographs is vital in providing a rapid and accurate diagnosis in guiding the clinicians. Isolated single finger injuries are widely seen and radiographic investigation can be restricted to the affected part of the finger only. Digital radiographs are simple, noninvasive, easy to interpret, and cost-effective.

The RadioVisioGraphy (RVG) imaging system¹ commonly used in dentistry to take intraoral periapical radiographs features the latest innovations in digital radiography, delivering the highest image resolution (> 20 LP/mm). RVG consists of a sensor, monitor, and microcomputer components (►Fig. 1). The sensor has a sensitive area of 275×182 mm. A regular intraoral X-ray generator is used with a 200 mm cone with a 55 mm aperture which operates at 70 kV and 8 mA and exposure time of 2 to 3.2 seconds (►Fig. 2). The radiation dosage will be extremely lesser than the larger X-ray generator

Fig. 1 RVG sensor connected to the monitor. RVG, radiovisiography.

Fig. 2 Wall-mounted dental X-ray machine.

Fig. 3 RVG digital dental radiograph showing the terminal and middle phalanx and the interphalangeal joint of the index finger (of the author). RVG, radiovisiography.

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machines. The results are faster and better with no loss in image quality. The sensors are packed in shock-resistant cases and silicon padding offers protection from falls, bites and its waterproof as well, thus safely can be cold sterilized.

The RVG system can be used effectively for single digit phalanx or the interphalangeal joints, metacarpals and the articular cartilage radiographs as shown in **Fig. 3**. The radiograph shows a very high resolution, can be magnified, and viewed by contrast adjustment as well. Multiple radiographs can be done quickly with reduced radiation. The sensor can be conveniently kept inside a small polythene cover or inserted in a gloves cut during usage to avoid

contamination. Thus, RVG used in dentistry is an effective and faster alternative tool for finger injury imaging.

Conflict of Interest

None.

References

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