Should three-dimensional computed tomography be mandatory for all suspected mandibular fractures?

Adeyemo WL.

J Craniofac Surg. 2012 Jul;23(4):1226-7.

Should Three-Dimensional Computed Tomography Be Mandatory for All Suspected Mandibular Fractures?

To the Editor: A recent case report in The Journal of Craniofacial Surgery by Sever et all reported an unusual split fracture of the mandible in a 26-year-old woman with epilepsy. According to the authors, a vertical split of the parasymphysis and corpus of the mandible that was missed on routine radiographs was subsequently detected by three-dimensional computed tomography (TCT).1 The authors consequently concluded that TCT is crucial and should be mandatory for all suspected mandibular fractures instead of routine radiographs.1

Although I agree that TCTwas useful for the diagnosis of a rare and uncommon fracture in the case presented, the conclusion derived from the case cannot be justified. In most cases, mandibular fractures are relatively easy to diagnose with a combination of careful and thorough clinical examination and routine radiographic examination. A good combination of different views of the mandible usually reveals most cases of mandibular fractures. However, in few cases, mandibular fractures can be missed in routine radiographs. 1,5 Should TCT be recommended for the diagnosis of mandibular fracture? My response is "Yes." Should TCT be mandatory for the diagnosis of mandibular fractures? My response is "No."

To make TCT mandatory for the diagnosis of mandibular fractures is to downplay the invaluable role routine radiographs played in the diagnosis of mandibular fractures. In addition, the cost of acquiring TCT is much higher than those of routine radiographs, and in most cases, the cost matters for patients in either resource-endowed or resource-limited countries. Should TCT be mandatory for all suspected mandibular fractures as suggested by Sever et all? I do not think so. However, in cases where routine radiography fails to reveal a fracture despite the fact that there are high levels of suspicion based on clinical examination, a TCT may be indicated. Most mandibular fractures can easily be diagnosed with a combination of a thorough clinical examination and routine radiographic investigation.