

Introduction

Virtual endoscopy **VE** or computed endoscopy is a new method of diagnosis that uses computer processing of 3-dimensional image datasets such as computed tomography **CT** scan to provide simulated visualizations of patient specific organs similar or equivalent to those produced by standard endoscopic procedures (*Yuling et al., 2007*)

Rapid progress in computer technology and the development of new diagnostic equipment such as spiral-CT allow VE to be applied in clinical practice in the study of hollow organs (*Yuling et al., 2007*)

CT virtual endoscopy has been used to evaluate pathologic processes of the nasopharynx, larynx, and tracheobronchial tree (*Rogalla et al .2007*)

CT virtual endoscopic images subsequently generated allow pulmonologists and otolaryngologists for the anatomic perspectives of the large airway that they are clinically accustomed to viewing . Effective clinical consultation requires the practicing radiologist to be familiar with the technique of generating these images, as well as the anatomy and pathologic conditions shown(*Bradley et al .2009*)

Unlike virtual colonoscopy, no preprocedural patient preparation is needed to evaluate the large airways .CT virtual endoscopy applications are performed retrospectively to aid in the depiction of data detected on routine image interpretation that may be useful to referring physicians. The high contrast of an air-filled lumen renders 3D and 4D imaging that closely resembles the conventional endoscopic correlate (*Bradley et al . 2009*)

Finally there is evidence that the ability to merge and compare the real images e.g., from CT, MRI, and VE images of a subject can provide important insight for diagnostic preoperative strategies, improvement of the detection of submucosal lesions, and staging tumors during surgery (*Wang et al., 2001*)