Computed Tomographic Appearance of Colorectal Hepatic Metastases

S H Chiang,*, MBBS, FRCR, M Med (Diag Rad), C H Thng,** FAMS, MBBS, FRCR, C S C Teh,*** MD, DPBS, A G S Tan,**** FAMS, MBBS, FRCR, S L Poddar,+, MD, B S Wong,+, MBChB, P K H Chow,+++ FAMS, FRCS (Edin), A Y F Chung,++, MBBS, FRCS (Edin), L L P J Ooi,++++ FAMS, FRCS (Edin & Glas), MD

Abstract

Introduction: This article reviews the various computed tomography (CT) appearances of hepatic metastases from colorectal primaries and assesses the frequency of occurrence of the various patterns. Materials and Methods: This is a retrospective study of the CT appearances of histologically proven colorectal hepatic metastases in a group of 52 patients who had undergone surgical hepatic resection between January 1994 and December 2001. A total of 74 hepatic metastatic lesions were reviewed. All lesions were examined in the portal venous phase. Results: A discernible rim was seen in 54 lesions (73%). Thick rim was present in 36 lesions (48.6%) and thin rim in 18 lesions (24.3%). Enhancement of the rim was present in 62 cases (83.8%). Increased central attenuation was seen in 38 lesions (51.4%). Of these, the centre was heterogeneous in 76.3% and scar-like in 23.7%. A non-enhancing rim was seen in 12 lesions (16.2%) which appeared as lesions with “bevelled edge”. Thick enhancing rim with non-enhancing centre was the most common combination in 15 lesions (20.3%). Conclusion: An enhancing rim could be seen in 83.8% of lesions. Increased central attenuation was present in 51.4% of the lesions. Familiarity with the various CT appearances may facilitate identification and diagnosis of colorectal liver metastases.

Key words: Colorectal cancer, Imaging features, Liver metastasis

* Registrar
** Consultant
+ Medical Officer
*** Clinical Associate
++ Consultant
+++ Senior Consultant
++++ Consultant
Department of Diagnostic Radiology, National Cancer Centre
Department of General Surgery, Singapore General Hospital
Department of Radiology, Changi General Hospital
Department of General Surgery, Singapore General Hospital
Deputy Head
Department of Surgical Oncology, National Cancer Centre

Address for Reprints: Dr Chiang Siew Hwa, Department of Diagnostic Imaging, National Cancer Centre, 11 Hospital Drive, Singapore 169610.
Email: cshwa@yahoo.com