English Summary

This study was done on thirty (30) patients who had hepatic focal lesions. Theses patients were examined by MRI (T_1, Fast T_2, and Fast heavy T_2 sequences), CT (with and without contrast) , US , and color Doppler US . Complementary histopathological and laboratory data were also obtained.

The aim of this study is to discriminate between the benign and malignant hepatic focal lesions by using fast MRI sequences.

Among the thirty (30) patients examined , eighteen (18) patients had malignant lesions and twelve (12) patients had benign lesions .

** Th e incidence of different pathological types were:

Begin lesions :

- Hemangioma 10 % .
- Degenerative nodule 10 %
- Abscesses 7.2 %
- FNH 3.2 %
- Focal segmental hypertrophy 3.2%
- Adenoma 3.2%
- Caroli syndrome 3.2%

Malignant lesions :

- H.C.C 47%
- Metastasis 10 %
- Cholangiocarcinoma 3 %

**The general signs that favor presence of malignant lesion were:

1- Presence of capsule in T_1.
2- Presence of portal vein thrombosis.
3- Ill-defined margin of the lesions.
4- Presence of contour bulge.
5- Presence of different types of degeneration.
6- Hyperintensity in Fast T_2 with decreased the signal in Fast heavy T_2.
7- Multiplicity of the lesions.

** **Comparing the different modalities as regard the sensitivity, specificity, positive and negative predictive values:**

-All the modalities had 100 % sensitivity.
-The MRI was the most specific technique 100% , then CT 75% , then US 58% .
-Also all the modalities had 100% negative predictive values.
-The MRI had 100 % positive predictive value, then the CT 86 % , then the US 78% .

** **Comparing the different modalities in detection of portal vein thrombosis :**

-Color Doppler was considered the gold standard with 100% sensitivity , specificity , negative and positive predictive values .
-MRI had very high score, (100% sensitivity , 100% specificity , 100% negative and positive predictive values) .
-Then come the US (80% sensitivity , 100 specificity ,100% positive predictive value , and 90.9% negative predictive value) .
   Then, the CT   (50% sensitivity , 100 specificity ,100% positive predictive value , and 80% negative predictive value) .

** **Although the high specificity of the MRI, there are some limitation encountered with its use:**

-The non-existence of constant techniques makes it difficult to standardize parameters for each technique.
-There is practical and economical difficulty concerning the time , patient cooperativity and cost .
-Certain skills are needed to interpret MR images particularly for non radiologist .
-The rather limited capability of assessment the rest of the abdomen on the same sequence.