



ROLE OF USG GUIDED FINE NEEDLE ASPIRATION CYTOLOGY IN THE DIAGNOSIS OF HEPATIC LESIONS

Pathology

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KEYWORDS

INTRODUCTION

USG guided Fine needle aspiration cytology (FNAC) has been proven to be a very effective means of obtaining tissue from many different body sites for diagnosis. It was applied in liver as early as 1985.

FNAC is a rapid, less invasive method that can be employed for pathological evaluation of both benign and malignant hepatic lesions.

Inflammatory lesions and diffuse liver diseases may mimic mass like lesions or appear as non homogeneous lesions on radiographs can also be sampled by FNA to rule out neoplasms and differentiate it from other diagnosis.

Ultrasonography (USG) or Computed tomography (CT) guided FNAs of liver lesions increase the accuracy of sampling for deep seated lesions. Accuracy of FNAC is higher since multiple samples can be obtained and hence the chance of obtaining a representative sample is enhanced.

Accurately sampled, well prepared and stained cytological samples along with cell block preparations and correlation with clinical and radiological findings yield the best results.

Aims And Objective

To evaluate the role of USG guided Fine needle aspiration cytology (FNAC) in the diagnosis of various hepatic lesions.

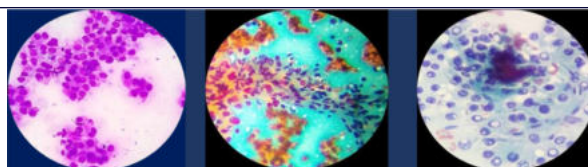
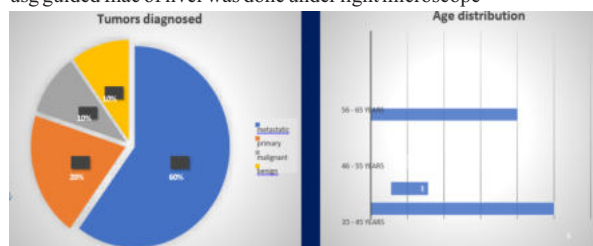
MATERIALS AND METHODS

The present study was a retrospective study of a total 10 usg guided FNACs performed on liver lesions and cytological examination was done in the pathology department of Assam Medical College ,over a period of 10 months from jan,2023 to Oct,2023.

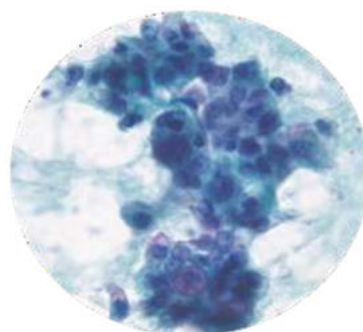
In each case a percutaneous FNAC of the mass was done under realtime USG guidance, in the Department of Radio-diagnosis,AMCH,while taking absolute aseptic precautions, by the best route, as was suggested by the radiologist.

A 10ml disposable plastic syringe and a 22-gauge needle were used. For deep-seated lesions, a 20–22 gauge spinal needle was used.

Both wet fixed and air dried smears were used for cytological examination. Retrospective analysis of MGG and PAP stained slides of usg guided fnac of liver was done under light microscope



- Metastatic Adenocarcinoma (MGG stain, 10x view) Showing acinar formations.
- HCC (PAP stain, 10x view) Showing transgressing capillaries
- HCC (PAP stain, 40x view) Showing intranuclear cytoplasmic inclusions



Cholangiocarcinoma – pleomorphic ,enlarged hyperchromatic and occasional nucleoli

- In our study most patients were between the age group of 36 to 45 years.
- In our study the most common case diagnosed was metastatic carcinomatous deposits (adenocarcinoma).
- Two cases each of hepatocellular carcinoma and cholangiocarcinoma (well differentiated) were also diagnosed.
- One case of usg guided fluid aspiration from liver was found to be benign.
- The most important cytomorphological features of primary tumors were cellularity, architectural patterns, cytological features of individual cells and background material.
- The main architectural pattern seen was broad trabeculae with transgressing blood vessels, cohesive clusters and endothelial wrapping.
- The primary liver malignancy in our study seen was only HCC. Individual cells were polygonal with irregular nuclear contours and single or multiple macronucleoli, abundant eosinophilic granular cytoplasm. Intranuclear cytoplasmic inclusions and bile plugging were also seen.
- Among the metastatic lesions adenocarcinoma were the most common diagnosed secondaries which showed glandular or acinar pattern, intra- and extracytoplasmic mucin. These tumors mainly came from the GIT, gall bladder, breast, lung and prostate.
- In the hepatic cholangiocarcinoma isolated and sheets of cuboidal cells showing varying degree of nuclear enlargement and

pleomorphism was seen.

CONCLUSION

The clinicopathological evaluation of liver lesions is often challenging and remains an enigma, both to the clinician as well as the pathologist.

In the present study, it was concluded that USG-guided FNAC is a very useful procedure in the diagnosis of hepatic lesions as the procedure is simple, safe and also suitable for debilitated patients. The early diagnosis can be done by FNAC along with USG finding without any serious complications related to the procedure. USG guided FNAC also plays an important role at centres like ours where it is the only diagnostic tool for hepatic lesion where facility for liver biopsy (Tru-cut or open), other ancillary studies and surgery are not available. Thus, FNAC is a simple and effective diagnostic tool in our hand and its use should be encouraged.

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