



## GUIDED FINE NEEDLE ASPIRATION CYTOLOGY IN THE DIAGNOSIS OF GALLBLADDER CANCER

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**ABSTRACT** **Introduction:** Biliary tract cancer (BTC) is a rare type of malignancy that makes up of less than 1% of human malignancies and 10–15% of all primary liver cancers. Most commonly, it presents in the seventh decade of life with a small predominance in males. Gallbladder cancer (GBC) is the most common malignancy of the biliary tract, representing 80–95% of that group, and is the 5th most common cancer of the gastrointestinal system. It has a low incidence in Western Europe and the USA but remains a significant health problem in other parts of the world, such as Central and Eastern Europe and other countries like India and Chile. **Material and Methods:** This study is a retrospective Study review that was carried out in Gajra Raja Medical College, J.A. Group of Hospitals. A thorough and systematic electronic search of the literature was performed to identify articles on the diagnostic performance of FNAC on gallbladder lesions. The databases were searched from 1st January 2022 to 1st July 2023. **Results:** The study was carried out from 50 patients, out of them youngest was 22 years female and eldest was 73 years .both of them were positive for malignancy. In our studied we have found that there is female predominancy for malignancy as compared to males.

### KEYWORDS :

#### INTRODUCTION

Biliary tract cancer (BTC) is a rare type of malignancy that makes up of less than 1% of human malignancies and 10–15% of all primary liver cancers.<sup>1</sup> Most commonly, it presents in the seventh decade of life with a small predominance in males.<sup>1</sup> Gallbladder cancer (GBC) is the most common malignancy of the biliary tract, representing 80–95% of that group, and is the 5th most common cancer of the gastrointestinal system.<sup>2</sup> It has a low incidence in Western Europe and the USA but remains a significant health problem in other parts of the world, such as Central and Eastern Europe and other countries like India and Chile.<sup>1</sup> Gallbladder cancer typically presents either via histological workup following simple cholecystectomy, or symptomatically, usually at an advanced stage.<sup>1</sup>

It can also present as an incidental mass on imaging. Symptoms are characteristic of gallbladder and biliary tract pathology and include right upper quadrant and epigastric pain, jaundice, nausea and vomiting, anorexia and weight loss.<sup>3</sup> Only 3–8% of patients have a palpable mass at diagnosis.<sup>3</sup> Patients with advanced disease have very poor prognosis, making early diagnosis of paramount importance. Five-year survival rates of 95–99% have been reported when diagnosis is made at stage I or II. However, this drops to 2–12% in cases where the diagnosis of malignancy is made at stage III or IV.<sup>4,5</sup> In general, the prognosis of gallbladder cancer is inferior to all other types of cholangiocarcinoma if it is not diagnosed at an early stage<sup>1</sup> a better oncologic outcome with fewer complications and improved overall survival.

The aim of this systematic review is to evaluate the efficacy and safety of fine needle aspiration cytology (FNAC) in early diagnosis of gallbladder malignancy and assess the potential role it could have in the management of GBC.

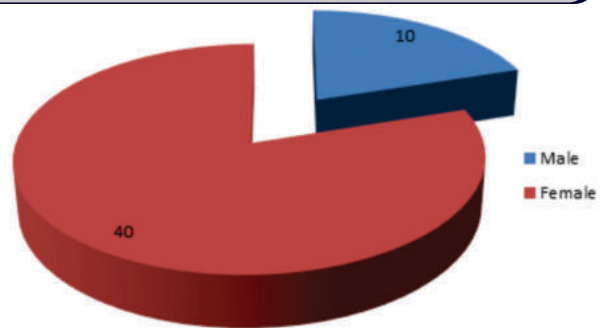
#### MATERIAL AND METHODS:

This study is a retrospective Study review that was carried out in Gajra Raja Medical College. J.A. Group of Hospitals. A thorough and systematic electronic search of the literature was performed to identify articles on the diagnostic performance of FNAC on gallbladder lesions. The databases were searched from 1st January 2022 to 1<sup>st</sup> July 2023.

#### RESULTS:

**Table 1: Distribution Of Cases According To Diagnosis**

| Serial no | Diagnosis                 | No of cases | Percentage |
|-----------|---------------------------|-------------|------------|
| 1         | Adenocarcinoma            | 23          | 46         |
| 2         | Suspicious for malignancy | 15          | 30         |
| 3         | Few atypical cells        | 8           | 16         |
| 4         | No opinion possible       | 4           | 8          |



**Graph 1 : Distribution Of Cases According To Gender**

The study was carried out from 50 patients, out of them youngest was 22 years female and eldest was 73 years .both of them were positive for malignancy. In our studied we have found that there is female predominancy for malignancy as compared to males.

#### DISCUSSION

This systematic review shows that FNAC is a diagnostic tool with very high sensitivity, specificity and diagnostic accuracy that can be very useful in diagnosing gallbladder malignancy, while it also carries a zero to minimal complication rate.

According to our review of the literature and to the best of our knowledge, our study is the largest systematic review with the largest number of included articles and the largest total number of patients focused solely on the diagnostic performance of FNAC in the assessment of gallbladder tumors.

Despite being well-documented in the literature efficiency of FNAC in the evaluation of gallbladder malignancies, it is still not clearly included in the current guidelines of diagnosis and management of gallbladder polyps and malignancies.<sup>1,6,7</sup> According to these guidelines, investigating of a suspicious gallbladder mass includes multiphasic abdominal and pelvic computed tomography and magnetic resonance imaging with intravenous contrast, as well as evaluation of tumor markers, such as CEA and CA 19-9 and diagnostic laparoscopy in cases of suspicion of an irresectable tumor.<sup>6</sup> Biopsy is also only indicated in cases where imaging findings suggest irresectability of the tumor.<sup>6</sup> Moreover, currently suspicious gallbladder polyps are managed with laparoscopic cholecystectomy.

#### CONCLUSIONS

This systematic review demonstrates that FNAC is a diagnostic tool

with very high efficiency that can play a major role in the management of gallbladder masses, by facilitating accurate diagnosis of GBC. FNAC can be performed either by a regular transabdominal ultrasound or an endoscopic ultrasound with an insignificant complication rate. Based on the importance of diagnosing GBC at an early stage to ensure maximum survival, we suggested that all suspicious gallbladder polyps/masses should be further evaluated with FNAC. In case of a positive result, the patient should be referred to an advanced HPB center for further evaluation and management. Otherwise, the patient can be listed for a regular cholecystectomy in a non-urgent basis without further investigations needed. Exploration of other advanced diagnostic techniques should also be attempted in the future to propose further modifications to the current guidelines to ensure the best possible outcomes for patients with GBC.

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