



AUTOPSY STUDY OF LIVER METASTASES IN ADULT PATIENTS IN TERTIARY CARE HOSPITAL OF MUMBAI.

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ABSTRACT

Silent liver diseases are common amongst apparently healthy individuals and are sometimes diagnosed only at autopsy. In present study we came across 16 cases of liver metastasis. Metastasis present in 80% of cases as compared to 20% of primary malignant tumors. It is observed that in adults metastasis in liver from other primary sites is much more common than primary hepatic tumors which is also similarly reported in literature^{1,2}. The commonest clinical presentation were abdominal distention (62.50%), Ascites (62.50%), abdominal pain (56.25%), jaundice (56.25%), hepatomegaly (50%), weight loss (43.75%)^{1,2,4,5}. Clinical features quite inconsistent, patient can be often be asymptomatic. Obstructive jaundice, massive intraperitoneal haemorrhages and features mimicking cirrhosis are other unusual manifestations^{1,3,12}. In liver metastasis, middle age, predominantly male adults were more commonly affected. The liver is common site for metastases mainly from breast, lung and colon, stomach and pancreas¹. However cancer at any site of body may spread to the liver¹.

KEYWORDS : Liver Metastases. Autopsy.

INTRODUCTION

The liver is one of the organs mostly involved in metastatic disease from a variety of cancers, in particular those of the gastrointestinal tract, lung and breast^{4,5,6,7}. Metastatic tumors are most commonly found in liver during autopsy. 40% of patients who died of cancer have hepatic metastases^{1,10}. In general patients with hepatic metastases die within 1 year. In the last instance, 5 years survival rate of 25% to 39% have been reported after resection of hepatic metastases¹¹. In a large series of 10,736 malignant neoplasm, PICKREN et al 1982 reported that the metastatic tumour in the liver was 41 times more common than the primary hepatic tumour^{1,10}. Sometimes, liver metastases can occur even when the primary cancer is removed. Common symptoms of metastatic liver cancer are abdominal pain, loss of appetite, weight loss, nausea, jaundice and unexplained fever. Liver cancer symptoms often do not appear in the early stages. As a result, liver cancer tends to be diagnosed at a more advanced stage. So, identification of risk factors and early diagnosis are the key issues for effective interventions. Information on liver metastases is very limited from this part of the country. Keeping all these views in mind, the present study was conducted with the following objectives

1. To study liver metastases in adults in relation to primary malignancy, clinical presentations, age and sex.
2. To correlate gross morphological appearances with histopathological features.
3. To study liver metastases in adults in relation to liver function test (LFT) and cause of Death with complications.

MATERIAL AND METHODS:

The present study was based on autopsy material. This was a descriptive cross sectional retrospective and prospective study carried out for the period of four years at tertiary care hospital. All the adult autopsies during this 4 years period were screened for liver metastases. Details of clinical history, examination and results of various investigative procedures with particular reference to liver function tests were obtained from hospital records whenever available. Standard routine procedure was used for fixation, embedding and sectioning. All sections were stained with Hematoxylin and Eosin.

OBSERVATION AND RESULTS:

In present study we came across 16 cases of metastasis (80% of cases as compared to 20% of primary malignant tumors). Metastatic involvement of liver is far more common than primary neoplasia¹. The commonest clinical presentation were abdominal distention (62.50%), ascites (62.50%), abdominal pain (56.25%), jaundice (56.25%), hepatomegaly (50%), weight loss (43.75%)^{4,5}. Primary site of the metastasis were lung (25%), gastrointestinal malignancy (18.75%), breast (12.5%), gall bladder (6.25%), pancreas (6.25%), urinary bladder (6.25%) and leukemia (25%), which coincide with reports in literature^{2,7,8}.

In present study middle aged predominately male adults were more commonly affected followed by elderly adults. The study with Male Female ratio of 3:1^{4,5,6,7}.

In all cases grossly liver was enlarged with more than one nodule distributed randomly in liver with central necrosis in nodules⁵ (Fig. 1, 2, 3) and histologically all metastasis was similar to respective of primary malignancy. (Fig. 4, 5, 6). Histology pleomorphic infiltrate affecting the portal tract and parenchyma was seen in leukemia (Fig. 7)^{2,3,9}. In present study the commonest cause of death was disseminated malignancy.



Fig 1: Metastasis of breast (IDC), showing multiple metastatic nodules



Fig 2: Metastasis of intestine (GIST) showing multiple metastatic nodules.



Fig 3: Intestine (GIST).

Histological all metastasis was similar to respective primary malignancy (Fig. 4, 5, 6).

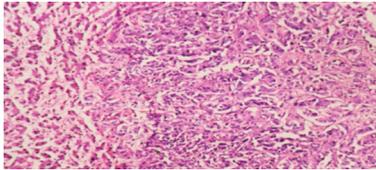


Fig 4: Metastasis of breast (IDC) (H & E 100x)

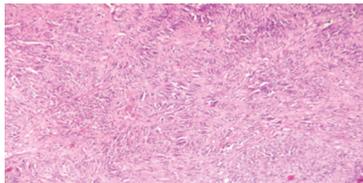


Fig 5: Metastasis of intestine (GIST) (H & E 100x)

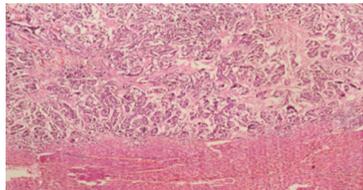


Fig 6: Metastasis of pancreas (Adenocarcinoma) (H& E 100x)

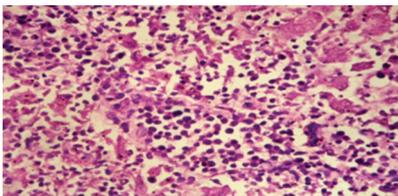


Fig 7: AML – Leukemic infiltrate in portal tract and sinusoids (H & E 100 x)

TABLE 1: SITES OF MALIGNANCIS IN MATASTATIC TUMOUR

Sr. No.	Site of Primary malignancy	No. of cases	%
1.	Lung	4	25
2.	Lymph reticular system (leukemia)	4	25
3.	Gastrointestinal malignancies	3	18.75
4.	Breast	2	12.50
5.	Urinary bladder	1	6.25
6.	Gall Bladder	1	6.25
7.	Pancreas	1	6.25

Lung and gastrointestinal malignancies were the common site of primary malignancies.

TABLE 2: AGE AND SEX DISTRIBUTION OF METASTATIC CASES:

Age group	Sex: Male	Female
18-40 yrs (Young adults)	5	1
41-60 yrs (Middle age)	6	2
60 yrs (Elderly)	1	1
Total	12	4

In present study middle aged predominately male adults were more commonly affected followed by elderly adults. Male: Female ratio is 3:1.

DISCUSSION:

As seen from present study, Liver metastatic cancer is not an uncommon disease in this part of India. In present study we came across 16 cases of metastasis. Metastasis present in 80% of cases as compared to 20% of primary malignant tumors. It is observed that in adults metastasis in liver from other primary sites is much more common than primary as reported in literature². The commonest clinical presentation were abdominal distention (62.50%), Ascites (62.50%), abdominal pain (56.25%) jaundice (56.25%) hepatomegaly (50%), weight loss (43.75%)^{4,5}. Primary site of the metastasis were lung (25%), gastrointestinal malignancy (18.75%), breast (12.5%), gall bladder (6.25%), pancreas (6.25%), urinary bladder 6.25% and leukemia (25%) which coincide with reports in literature¹. Grossly, most metastatic carcinoma form multiple, spherical, nodular masses which are variable size with hepatomegaly. The tumour deposits are grey white, well demarcated, soft to firm, with areas of hemorrhages in few cases. The surface of the liver shows characteristic central umbilication. Histologically all metastasis was similar to respective of primary malignancy^{1,5}. In present study middle aged (41-60 yrs) adults were more commonly affected. Male predominates in present study with Male: Female ratio of 3:1.

CONCLUSION:

It may be concluded from the present study that metastatic involvement of liver is far more common than primary neoplasia². Metastasis present in 80% of cases as compared to 20% of primary malignant tumors. Metastatic tumors are most commonly found in liver during autopsy and if not detected early may lead to serious outcome^{1,2}. The liver is common site for metastases mainly from breast, lung and colon, stomach, gall bladder and pancreas¹. Any cancer inside of the body may spread to the liver including leukemia¹. The study was conducted on the specimen collected from the mortuary and not reflect the actual pattern of liver diseases and emphasizes the need for further studies for early detection and treatment of the vulnerable group of people in the local population. Autopsy study is a good stepping stone towards achieving good morphological accuracy. In secondary liver cancer, continue to be an important cause of morbidity and mortality in tropical countries. Early diagnosis and prompt interventions improve the survival and outcome of the disease.

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