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## A Study of Management of Hepatic Abscess by Percutaneous Catheter Drainage

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### ABSTRACT

**Background: Aim and Objectives:** To distinguish the efficacy of percutaneous catheter drainage (PCD) approaches in the management of hepatic abscess.

**Methods:** In this study, 60 cases of liver abscess were taken with age group between 25-60 years. Study was done in surgery department of government hospital Sikar from October 2014 to September 2016. All cases were registered satisfied the inclusion criteria and exclusion criteria. Group A was given conservative treatment and Group B was given percutaneous catheter drainage. Results were analyzed statistically.

**Results:** It was revealed in this study that mostly males were there, 55 out of 60 cases. The most frequent complaint was abdominal pain and tenderness in right hypochondrium in 85% of the cases. The average hospital stay for patients in group B was 5 days as compared to 7 days in group A. Pain relieved in just 4 days in group B as compared to group A, it was 6 days.

**Conclusions:** Percutaneous catheter drainage is a successful option of treatment in hepatic abscess as compared to conservative management.

**Keywords:** Hepatic Abscess, Catheter Drainage, Conservative Treatment.

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## INTRODUCTION

Liver abscess is most frequent in India. The patients of liver abscess are treating with antibiotics along with percutaneous needle aspiration (PNA) or percutaneous catheter drainage (PCD), with surgical drainage being used only in patients who fail to respond to such treatment.<sup>1</sup> Though both PNA and PCD have been shown to be efficient and safe, data comparing these procedures are limited. It usually occurs in the right lobe of the liver, and in very few cases in left lobe. Patients complain of fever, chills, pain in the right hypochondrium with tenderness.<sup>2</sup> There may be weight loss and hepatomegaly. Percutaneous drainage combined with antimicrobial has become the first line and mainstay of

treatment for most of the abscesses.<sup>3</sup> It is suggested that percutaneous drainage (needle aspiration and catheter drainage) can improve response to antibiotic treatment, reduce hospital stay and the total cost of treatment. They are nonetheless an invasive procedure requiring the passage of a wide bore needle and pigtail catheter into a highly vascular organ and can be associated with the risk of bleeding. Historically, morbidity and mortality rates associated with the treatment of pyogenic liver abscess has been high.<sup>4</sup> This has improved significantly with the introduction of ultrasound (US) and computed tomography (CT). When detected early, effective treatment of small abscesses involves the use of

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diagnostic percutaneous aspiration and appropriate intravenous antibiotics. Liver abscesses larger than 5 cm in size often require prompt drainage for resolution of sepsis.<sup>5</sup> PCD- A trocar with a 14 F multisidehole pigtail catheter was inserted into the abscess cavity under local anesthesia and US guidance. The contents of the abscess were aspirated and the catheter was fixed to the skin and connected to a bag. The first re-view US was done when drainage over the last 24 hours had declined to <10 mL.<sup>5</sup> If the abscess had resolved, the catheter was removed. If residual cavity was present, the catheter was flushed with saline and aspirated till no material was aspirated.

## METHODS

In this study, 60 cases of liver abscess were taken with age group between 25-60 years. Study was done in surgery department of Government Hospital Sikar from October 2015 to September 2016. All cases were registered fulfilled the inclusion criteria and exclusion criteria. Group A was given conservative treatment and Group B was given percutaneous catheter drainage. Routine blood investigations were done. X-ray chest and abdomen with ultrasonography was done to diagnose liver abscess. Intravenous antibiotics in form of cephalosporins or fluoroquinolones and metronidazole were given to all patients. PCD was done in Group B patients. Results were analyzed statistically.

## RESULTS

In this study, it was shown that mostly males were there, 55 out of 60 cases. The most common complaint was abdominal pain and tenderness in right hypochondrium in 85% of the cases. Mean duration of intravenous antibiotic and duration to clinical relief were shorter in the PCD group than in group with conservative approach. The average hospital stay for patients in group B was 5 days as compared to 7 days in group A. Pain relieved in just 4 days in group B as compared to group A, it was 6 days.

## DISCUSSION

Liver abscesses, both amebic and pyogenic, continue to be an important cause of morbidity and mortality in the tropical countries. Patients usually present late when the liver abscess attains a large size<sup>6</sup>. The introduction of the percutaneous approach to liver abscesses was initially described by MaFadzean et al<sup>12</sup> from Hong Kong in 1953.<sup>7</sup> The body of literature in recent years suggests that PD of liver abscess is a safe and effective method for drainage of pyogenic liver abscess. As a result, this modality has become viewed as the treatment of choice, being superior to SD. The attraction of PD is related to its minimally invasive approach and the ability to perform the procedure without

general anesthesia.<sup>8</sup>

Selected series of PD drainage report success rates of more than 95%. However, PD is not suitable for all patients with liver abscesses. In cases of rupture, difficult access to the abscess due to anatomic location, coexisting pathology requiring open surgery, SD becomes the only treatment option.<sup>9</sup> In addition, the abscesses that fail to resolve after PD will also have to rely on an open surgical approach for successful management.<sup>10</sup> Although the trend is toward PD, it is difficult to assess the true merits of each procedure to say which modality produces better clinical outcome. Singh and Kashyap also reported faster and more complete resolution of abscess cavities after PCD<sup>11</sup>, while Rajak et al<sup>12</sup> found that the time needed for total resolution is similar after PCD and PNA. Percutaneous drainage (either needle aspiration or catheter drain-age) with systemic antibiotics has become the preferred treatment for the management of pyogenic liver contrast, for amoebic abscesses, the primary mode of treatment is medical.<sup>13</sup> A preferred method most widely used for liver abscesses, recent studies have shown PNA to be simpler, less costly, and equally effective.<sup>14</sup> Usually needle aspiration is preferred for smaller abscesses and catheter drainage is done in larger ones. But no clear-cut guidelines have been laid.

## CONCLUSION

Percutaneous catheter drainage is an effective option of treatment in hepatic abscess as compared to conservative management.

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