Journal of Cardiovascular Disease Research

ISSN: 0975-3583, 0976-2833 VOL9, ISSUE3, 2018

Original Research Article

To study the clinical profile & comorbidity between ASP & Cath in the percutaneous treatment of large liver abscess

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Abstract

Background & Methods: The aim of the study the clinical profile & comorbidity between ASP & Cath in the percutaneous treatment of large liver abscess. Continuous catheter drainage will be done with a 12-20F multihole catheter. Catheter will be inserted into the largest cavity of the abscess. Aspiration will be performed with the catheter until no more pus is removed. The catheter will be then fixed to the skin for continuous external drainage and left in situ until no more pus is draining for 24 hours.

Results: The chi-square statistic is 5.94. The *p*-value is .014801. The result is significant at $p < .05$. The chi-square statistic is 3.9057. The *p*-value is .271826. The result is *not* significant at $p < .05$. The chi-square statistic is 106.4514. The *p*-value is < 0.00001. The result is significant at $p < .05$.

Conclusion: It is observed that in view of very significant difference in volume of pus that can be drained at very first sitting, duration to attain clinical relief, and thus duration I/V antibiotics needed the technique of continuous catheter drainage is cost effective. The repeated aspirations with a wide bore needle may be uncomfortable or more traumatic to the patients as compared to catheter drainage.

Keywords: clinical & comorbidity, needle aspiration (ASP) & catheter drainage (Cath) & liver.

Study Design: Comparative Study.

1. Introduction

Liver abscess is a pus-filled mass inside or attached to the liver. Liver abscesses have been recognized since the age of Hippocrates[1]. In 1883, Koch described the amoebae as a cause of liver abscess. Although a relatively uncommon lesion, 'Liver abscess' is a common pathology in India with a high mortality rate because of delayed detection and treatment. Pyogenic abscesses account for three quarters of hepatic abscess in developed countries[2]. Elsewhere, amoebic abscesses are more common, and worldwide, amoebae are the commonest cause. Amebic liver abscesses are more common in subtropical and tropical climates, and in areas with poor sanitation and crowded living such as many parts of our countary.

Liver receives blood supply from both systemic and portal circulations. Increased exposure to bacteria/micro-organisms causes increased susceptibility to infections and thus abscess

ISSN: 0975-3583, 0976-2833 VOL9, ISSUE3, 2018

formation[3]. However, Kupffer cells lining the hepatic sinusoids clear the organisms so efficiently that infection rarely occurs. In cases of amoebic liver abscesses caused by E. histolytica; the organism produces enzymes and thus produces hydrolytic dissolution of the liver tissue- results in liquefaction necrosis of small areas of the liver which coalesce to form a single large abscess[4].

The method by which bacteria reach the liver reflects the underlying causes. Liver abscess after intra-abdominal sepsis is most likely to be caused by hematogenous spread through the portal bloodstream[5]. Hematogenous spread by hepatic arterial flow may occur in infectious endocarditis. Abscesses arising from hematogenous transmission are usually caused by a single pathogen; those arising from biliary obstruction are usually caused by a mixed flora. Patients with metastatic cancer to the liver, diabetes mellitus, and alcoholism are more likely to develop a liver abscess.

2. Material and Methods

Study was conducted at Index Medical College Hospital & Research Centre, Indore for 01 Year. Features like patients' demographics, underlying coexisting diseases (like diabetes mallitis, malignancy, biliary tract diseases etc.), the presenting clinical symptoms such as fever, abdominal pain, anorexia/malaise, jaundice, nausea/vomiting etc. and pretreatment liver function test will not be considered and minimum size of abscess included will be 10cm by USG.

Continuous catheter drainage will be done with a 12-20F multihole catheter. Catheter will be inserted into the largest cavity of the abscess. Aspiration will be performed with the catheter until no more pus is removed. The catheter will be then fixed to the skin for continuous external drainage and left in situ until no more pus is draining for 24 hours.

3. Result

TABLE 1: AGE DISTRIBUTION

AGE	ASPIRATION GROUP	CATHETER DRAINAGE GROUP
Range	14-72	12-88
Median	46	52
Average	48.5	47.2

TABLE 2: SEX DISTRIBUTION

SEX	ASPIRATION GROUP	CATHETER DRAINAGE GROUP
Males	44	56
Female	22	10

The chi-square statistic is 5.94. The *p*-value is .014801. The result is significant at $p < .05$.

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TABLE 3: COMORBIDITY

S. No.	COMORBIDITY	ASPIRATION GROUP	CATHETER DRAINAGE GROUP
1	Diabetes	10	06
2	GB/CBD stones	18	16
3	Cholangitis	08	14
4	H/O GI Surgery	08	04
5	Colitis	00	02

The chi-square statistic is 3.9057. The *p*-value is .271826. The result is *not* significant at $p < .05$.

TABLE 4: CLINICAL PROFILE

S. NO	CLINICAL FEATURES	ASPIRATION GROUP	CATHETER DRAINAGE GROUP
1	FEVER	56	52
2	RIGORS, CHILLS	16	20
3	RT HYPO PAIN	60	62
4	ANOREXIA/MALAISE	64	44
5	JAUNDICE	14	04
6	NAUSEA/VOMITING	20	24

The chi-square statistic is 106.4514. The *p*-value is < 0.00001. The result is significant at $p < .05$.

4. Discussion

Liver abscess is a usually experienced issue in clinical practice in India, which in the event that not viewed in a serious way conveys a high mortality. Presently, there are 2 elective techniques for seepage of discharge from a huge liver ulcer. Percutaneous restorative systems have been progressively performed contrasted and open careful seepage (SD)[6]. Liver abscesses bigger than 5 cm are right now treated by intravenous anti-microbials and either percutaneous persistent catheter seepage (PCD) or open careful waste. Percutaneous procedures have been progressively acted instead of open seepage as first-line treatment. This change in outlook has been powered by the drive for okay and less-obtrusive methodology and the careful choice being saved for percutaneous failures[7]. However there is an absence of information to help percutaneous seepage over percutaneous desire as first-line treatment for huge liver abscesses of >10 cm size. Consequently, the pattern in administration of liver abscesses has been moving unequivocally toward non-careful strategies. Huge extent of

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patients can be treated with magnificent outcomes with a mix of parenteral anti-toxins and picture directed percutaneous treatment. Our own organization suggests discontinuous needle goal in any event, for exceptionally enormous abscesses, bombing which open careful seepage is recommended[8].

In current act of negligibly obtrusive treatments nonstop catheter waste and needle goal have come up as clever procedures; more modest ones can be treated with a blend of anti-microbials and needle yearning, however which is better in huge liver abscesses (>10 cm): a catheter or needle is debatable[9].

Huge abscesses typically should be suctioned commonly; rehashed goals with a wide drag needle might be awkward or more horrendous to the patients when contrasted with catheter which can be left in situ for long time. Additionally, an endeavor to clear the boil pit totally may prompt discharge; as it had happened in one of our patients in yearning bunch.

5. Conclusion

It is observed that in view of very significant difference in volume of pus that can be drained at very first sitting, duration to attain clinical relief, and thus duration I/V antibiotics needed the technique of continuous catheter drainage is cost effective. The repeated aspirations with a wide bore needle may be uncomfortable or more traumatic to the patients as compared to catheter drainage.

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