Broncho - Hepatic- Fistula: A Complication of Rupture Liver Abscess

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Introduction

Abscesses of liver are relatively more common in Tropical countries in comparison to temperate climatic countries. Liver Abscess may be Pyogenic or Amoebic in origin.

If not checked early and treated in time, Liver Abscess may expand and Liver Abscess may rupture in any direction. Peritoneal rupture results in wide spread peritonitis or in the formation of Sub-Phrenic Abscess.

Extension through the diaphragm lead to Thoracic Empyema or rupture into the bronchus with the expectoration of large volume of Anchovy-paste coloured pus from amoebic liver abscess and bile stained pus from cholangitic abscess pyogenic.

Rupture of a Liver Abscess into the lung and bronchus with persistent bronchus Broncho-Hepatic Fistula may require formal thoracotomy, decorticoive of the lung for Empyema and diaphragm resection of severely damaged pulmonary tissue and repair of diaphragm.

Case Report

A 24 years old serving soldier had fever and chest pain for the problem he went to Seti Zonal Hospital for the primary medical treatment. After antibiotic and analgesic treatment as his problem did not subside he was referred to Birendra Army Hospital 15/3/2063 (29th June 2006).

At Birendra Hospital he was admitted in Medical ward. On his chest x-ray detected Rt. side pleural effusion. He had diagnostic Rt. pleural tap with thick pus drained from Rt. pleural cavity. He was treated with injection antibiotics Taxim 1 gm TDS.

He still continued to run high temperature with chest pain and clinically detected Hepatomegaly. On ultra sound abdomen large abscesses multiple were detected in Liver. Ultra sound guided Liver abscesses was aspirated pus from liver was found positive for...
E. Coli and pus from liver aspirate and pleural aspirate was negative for trophozoites of E. Histolytica.

Even with high dose of Inj. Antibiotics Taxim and Inj. Metronidazole. His condition continued to deteriorate.

On 05.04.2063 he started to cough with expectoration of purulent sputum mixed with bile.

Sputum was positive for Bile. Patient was suspected to have developed rupture of liver abscess with developments Rt. Empyema thoracic, Lung abscess and formation of Rt. Broncho-Hepatic Fistula.

Patient was referred to cardio-thoracic surgery on 05.04.2063 he had Emergency Rt. Thoracostomy Chest Tube Drainage. Rt. chest tube was draining thick pyogenic fluid and air. The pleural fluid was positive for bile.

- In the pleural drain Air and bile leak was persistent.
- CT scan of the patient’s chest and abdomen was done with contract enhanced.
  CT scan of chest and abdomen revealed.
  1. Multiple huge abscesses in liver.
  2. Rupture of one of the liver abscess.
  4. Liver abscess community with Rt. pleural cavity with Empyema formation.

- 11.04.2063 Rt. Thoracotomy operation was done.

- The operative findings were:
  1. Huge multi loculated Empyema cavities over Rt. pleural cavity.
  2. Collapse of Rt. lung upper and middle lobe with thicked pleura.
  3. Rt. lung lower lobe destroyed and adherent to diaphragm.
  4. There was large rupture in central tendon of Rt. diaphragm.
5. Large liver abscess cavity comminuting to Rt. lung lower lobe.

Operation

1. Rt. Thoracotomy
2. Cleaning of pus from Rt. Pleural cavity.
3. Decortiation of Thick pleura on Rt. lung upper and middle lobes.
5. Liver abscess cavity closed after opening cholangitic ducts opening were closed, Haemostasis secured.
7. After Haemostasis and Aero-stasis secured chest closed in layers with one chest tube drain.

Post Operative Period

- Patient had smooth post operative recovery.
- Chest drain was continued for long time for 6 weeks with chest physiotherapy for satisfactory Expansion of obliteration Rt. lung and of Empyema cavity.
- Patient had antibiotics and Metronidazole for 6 weeks.

Follow up: Follow up CT scan of chest and Abdomen shows:

At 5 weeks post operative

1. Rt. lung expansion and decrease in Rt. Empyema cavity.
2. Reduction in size of liver abscesses.

At 12 weeks

- Rt. lung was fully Expanded with obliteration of Rt. Empyema cavity
- All liver abscesses were fully resolved.
- Patient was discharged on 29/08/2063 (15th Dec. 2006)

Follow up after one year of operation:

Patient was healthy with normal pulmonary function. No hepatomegaly and no liver abscess detected on ultrasound examination

Discussion

Liver abscess both pyosenic and Amoebic are still common in medical practices in Nepal. Most of the liver abscesses detected early do response well with Antibiotics and Metronidazole treatment.

Ultrasound and CT Scan picture of liver abscess may resemble with picture of CT scan of patient with hydatid cysts of liver. (Rajbhandary G.L.)

Early cases of Liver Abscess both amoebic and pyogenic do response well with conservative medical management with antibiotics and aspiration.
But we still come across patients with complication of rupture of liver abscess. Liver abscess with rupture into Rt. Pleural cavity with formation with Broncho-Pleural Fistula has been reported by this author in Medical Journal of Birendra Army Hospital MJSBH, Vol III 2000. (Rajbhandary G.L)

Liver Abscess with rupture into Rt. Lung with direct communication of bronchial opening of Rt. lung with liver abscess cavity with formation of Broncho–Hepatic Fistula is not so common. Very few cases of rupture of liver abscess with formation of Broncho-Hepatic-Fistula has been published in Literature. (Sekar NN et al 1986, Kapoor OP 1990).

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Conclusion

1. Early detection of Liver Abscess by Ultra sound examination of abdomen in patient with fever and hepatomegaly is advised to prevent complication of rupture of liver abscess.

2. Late complication of rupture of liver abscess with Broncho-Hepatic- Fistula (Broncho-Biliary-Fistula) can be managed satisfactory with surgery and antibiotics.

References


