

Percutaneous Cholecystostomy As Bridge To Surgery In Patients With Hemodynamically Unstable Patients With Pyocele With Acute Cholecystitis With Sepsis

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Abstract:

Acute cholecystitis accounts for 14–30% of cholecystectomies [1] and is defined as an inflammation of the gallbladder, usually caused by cystic duct obstruction [2]. The most common causes of cystic duct obstruction are gallstones and cholestasis. Other causes include masses (primary tumors or gallbladder polyps), parasites, or foreign bodies. Acute calculous cholecystitis is a common disease that requires surgical treatment. Laparoscopic cholecystectomy has during the last two decades become the therapeutic strategy for acute cholecystitis (AC)(3). Standard treatment for acute cholecystitis / pyocele is laproscopic cholecystectomy, being high risk and can have increased morbidity or mortality with hemodynamic unstablity , or with increased comorbidities (4). Percutaneous cholecystostomy was introduced in 1980 as an emergency procedure for decompression of gall bladder , it can be used as in emergency followed by elective cholecystectomy , it gives time to evaluate disease and also works as an emergency procedure for decompression to optimise patients

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I. Case Report Of Severe Acute Cholecystitis:

A female 95 year old came to ER e4v5m6 with complains of pain in abdomen which was of gradual onset , since 5 days, pain was over upper abdomen from x 5 days , not passing stool and flatus , she had projectile bilious vomiting, on examination her abdomen was distended, guarding present , note was resonant all over abdomen , her vitals were bp 99/55, pulse 120 bts /min , temperature 98F, spo2 94% RA, comorbidities hypertension for long term for which she was taking oral amlovas 10 mg 12 hourly , was operated for right hand fracture orif x 5 years ago , In view of decreasing perfusion due to hypotension patient was taken on ionotrop support , crts was done ,Foleys , arterial line secured in ICU ,

CBC : HB 10.2 , TLC 39520 , PLATLET 1,73,000

LFT : SGOT 41 U/L, SGPT 20 U/L, ALP 540 U/L

ELECTROLYTES : K+ 3.2, NA 141, CHLORIDE 108

LDH: 267 IU/ML

CECT : GALL BLADDER IS DISTENDED WITH THICK EDEMATOUS WALL AND PERICHOLECYSTIC FLUID FAT STRANDING WITH HYPERDENSE CONTENT IN GALL BLADDER MECK LIKELY SLUDGE, CBD 7 MM WITH SMOOTH DISTAL TAPPERING WITHOUT EVIDENCE OF CALCULUS , LIKELY SENILE CHANGE

Diagnosis of cholecystitis + pyocele + septic chock was made Patient was started on injectable empirical antibiotics PIPTAZ ,METROGYL AND AMIKACIN , her TLC were in increasing trend due to on going septic shock . She was taken for Percutaneous USG guided pigtail drainage , as plan of surgery was after optimization , pigtail PCN drain 14 was inserted , in gall bladder via trans hepatic plane was fixed with 2.0 ethilon purse string manner , instant 280 ml was drained , pyobillious content was drained , After pigtail placement patient condition improved in 48 hours she became hemodynamically stable

On day 2 of pigtail placement : norad was tapered to 4 ml/hr and o2 requirement was 2l np , abdomen flatus , motion passed girth decreased to 94 cm, pigtail drain was 200 ml

On pod 3 : vitals stable without support and on room air , pigtail 220 ml bilious , piptaz was stopped and meropenam was added

In view of no progress condition PAC done with explained high risk she was taken for emergency / life saving lap cholecystectomy

Intra op : 2 x 10 mm , 2 x 5 mm ports

Lap cholecystectomy done in standard steps , with 20 fr sub hepatic drain and peri hepatic drain placement With explained high risk she was taken for electively lap cholecystectomy .
Intra op 2 x 10 mm , 2 x 5 mm

Pathology : Gall bladder having calculus , gangrenous with adhesion , intra op Gall bladder not visualize densely adherent to omentum & tranverse colon & duodenu Adhesiolysis done Gall bladder visualised wall gangrenous and friable Calots dissected with difficulty.

Gall bladder removed from liver bed 2 x 20 fr drain placed sub hepatic and peri hepatic drain placed .
Patient condition improved and been discharged on pod 3

II. Discussion:

Acute gangrenous cholecystitis is serious complication of acute cholecystitis , increase edema and swelling causes ischemic changes in gall bladder wall causing ischemic changes and necrosis in wall , incidence ranges from 2 to 30% in all patients with cholecystitis , Recently, ultrasound-guided PTGD has received significant attention as a potential method of internal gallbladder drainage and is indicated for high-risk patients who cannot undergo cholecystectomy [5]. As our patient was old lady with 90 age with severe sepsis and septic shock due to pyocele. This study confirmed that ultrasound-guided PTGD was associated with the shortest operation duration, extubation time, and length of hospital stay . This could be because ultrasound-guided PTGD can be effectively performed with ultrasound assistance to directly observe the whole procedure, thereby reducing the risk of complications. Therefore, compared with traditional conventional surgery, ultrasound-guided PTGD is associated with more accurate localization, a clearer field of vision, less trauma, and lower risk of complications [6]. In our case pigtail was placed , in view of as bridge therapy to decrease the sepsis source to decompress disease and buy some time for optimising patient before definite surgical management , after drain placement the patients condition improved dramatically, As the Main gold standard treatment of acute cholecystitis is lap cholecystectomy but percutaneous cholecystotomy can be used as bridge to decrease overall gravity of disease and buys time to optimize the patient therefore, we also performed standard laproscopic cholecystectomy after stabilizing the patient , post operatively patient did well and was discharged with stable vitals.

III. Conclusion :

When dealing with patient high risk group for general anaesthesia , with hemodynamically instability , in case of gangrenous cholecystitis and gall bladder being focus of sepsis , percutaneous drainage , removal of source , dampens the overall morbidity , giving time to resuscitate and optimise patient for definitive lap cholecystectomy , resulting in decrease post operative complication , decrease shortest operation duration, extubation time, and length of hospital stay compared with the other three treatments

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