

## Broncho-biliary fistula: a rare complication of subphrenic abscess due to perforated gallbladder

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Background • A2016 to 2020 retrospective color 3 study found a 2.7% incidence of galbadder periodical adjustes. Approximately and a 2.7% incidence of galbadder periodical adjustes. Approximately and a 2.7% incidence of galbadder periodical adjustes. Approximately and a 2.7% incidence of galbadder periodical adjustes. Approximately and a 2.7% incidence of galbadder periodical adjustes. Approximately and a 2.7% incidence of galbadder periodical adjustes. Approximately and a 2.7% incidence of galbadder periodical adjustes. Approximately adjustes of periodical adjustes adjustes of periodical adjustes. Approximately adjustes of periodical adjustes adjustes of periodical adjustes of periodical adjustes. Approximately adjustes of periodical adjustes adjustes of periodical adjustes adjustes of periodical adjustes. Approximately adjustes of periodical adjustes adjustes of periodical adjustes adjustes of periodical adjustes. Approximately adjustes of periodical adjustes adjustes of periodical adjustes adjustes of periodical adjustes. Approximately adjustes of periodical adjustes adjustes adjustes of periodical adjustes adjustes adjustes of periodical adjustes				
<ul> <li>e<sup>2</sup>-general Gaussian male presents with voor male of performany provide stage performany. The stage performance de performany performany de performany d</li></ul>		Background		Case Description
<ul> <li>def sellibidition perforations prior to surgery. Relk factors include make genetal with the performance and hyperfigures and hype</li></ul>		A 2016 to 2020 retrospective cohort study found a 2.7% incidence	Brief History	
<ul> <li>made generate diabetes, "hypertension, and hypertension. The model in length of hospital sity was 85 days, compared 0-4 days.</li> <li>weeks of paralisent diaponated white block of paralisent diabetes diabetes diabetes. Also expected head you have the hospital sity was 85 days, compared 0-4 days.</li> <li>Weeks of paralisent diaponated white block of collections. The appendix data discretions days have the first of describe and adjust without galibladder paralisent discretions. Accompanying him, his is relates that his and eyes have changed by the hospital activity. They 2 paralisended here discretions are data and genes have changed by the particular discretions. Type 3 paralisended here discretions are data and genes have changed by the particular discretions. Type 3 paralisended here hospital activity. They 2 paralisended here hospital activity. They 2 paralisended here discretions are activity are paralisended by the hospital activity. They 2 paralisended here hospital activity. They 2 paralisend here hospital activity. They 2 para</li></ul>	L		62-year-old Caucasian male presents with two	Assessment and Plan
<ul> <li>motion is in of profits in the second second</li></ul>	L			Assessment and Flan
<ul> <li>median length of hospital stay was 8.5 days, compared to 4 days particulations.<sup>1</sup></li> <li>Contrast demonstrated statistic belowgits without galibladder particulations.<sup>2</sup></li> <li>Contrast demonstrated statistic belowgits without galibladder undergoing cholesystectomy.<sup>1</sup></li> <li>Contrast demonstrated statistic belowgits without galibladder undergoing cholesystectomy.<sup>1</sup></li> <li>Reports tatistic and event and favore tability and the statistic below does have changed aprediated the particulations.<sup>2</sup></li> <li>Past Medical History Gastroscophagal reflux and eventually lead to a fistulous connection between the galibladder perforations. Type 3 perforations are acuta and spread in the particulation of the statistic between the hospital stary.</li> <li>Past Medical History Gastroscophagal reflux and different types. 201 a fistulous connection between the galibladder perforations. Type 3 perforations is a stand of the performation strips. 3 perforations develop chorically and eventually lead to a fistulous connection between the galibladder perforations. Type 3 perforations develop chorically and eventually lead to a fistulous connection between the galibladder perforations. Type 3 perforations is a broncho-Binny strips. 2 perforations develop chorically and eventually lead to a fistulous connection between the galibladder perforations. Type 3 perforations were associated with cholellinkass.<sup>3</sup></li> <li>An actemedy rare complication or galibladder perforations, there is a lower index concersions around the management of borncho-Binny fistulas, marking this a faccuration topic for further stady.</li> <li>Acatemedy rare complication or galibladder perforations is a broncho-Binny fustulas, marking this a faccuration topic for further stady.</li> <li>Acatemedy rare complication or galibladder perforations is a broncho-Binny status, marking this a faccuration topic for further stady.</li> <li>The tabelergalibladdor perforations is a broncho-Binny status, marking thi</li></ul>	L	-	-	RUQ Peritoneal Drain into Subphrenic Abscess
<ul> <li>for patients diagnoed with acide cholesystits without galibadder performance. J.</li> <li>Objective finding include achycardia and edwided withe block trans. Also roperator those and statise base have change provide the patients. Base trans. Also roperator the patients discusses are statise that is as and week have change provide achycardia and edwided withe block trans. Base roperator the patients discusses. Base change in patients discusses are and earliers. Base change in patients discusses and earliers (GGT) compared to non-performated galibadder unencelycard earliers. Type 1 performances are acid and earliers earliers are acids and devices a surrounding abcreas and earliers. Type 1 performances are acid and earliers are acids and there was no difference in motality amongs the difference in motality amongs and the difference in motality amongs and the difference in motality amongs the difference in</li></ul>	L		· · · · · · · · · · · · · · · · · · ·	> Left in place, feculent foul-smelling drainage throughout the hospi
<ul> <li>performations:</li> <li>Objective findings include tabeysardis and alevated while block interview of the subport of the subp</li></ul>	L		- · · ·	
<ul> <li>Dipolation</li> <li>Objective findings include tactycardia and elevated white blocd call (WPC) count, total and directycardia and elevated white blocd in the discribution on performal gallbadders undergoing cholecystectory.</li> <li>Remeine in 1924 was the fits to deactibe and categorize and environment type, are subacute and develops a surrounding abuses, there was on thread and her visers such as the book?</li> <li>Repet Hermone Subscription (Categorize) as a contractive sleep apments, hyperior (Categorize) as a contractive sleep apment. Hyperior (Categorize) and Hyperior (Categorize) and Hyperior (Categorize) and Hyperior (Categorize) and Hyperior (Categorize) as a contractive sleep apment. Hyperior (Categorize) and Hyperior (Categorize) and</li></ul>	L		weakness. Also reports chest pain, shortness of	> Contrast demonstrated fistula between right subphrenic cavity an
<ul> <li>Objective findings include tachycards and devaled white block call (WE) count, total and refere to homps from and galaxies and the binds, and game adjusted galaxies and the binds, and game adjusted galaxies and the binds and game adjusted galaxies and the binds and game adjusted galaxies and the perion adjusted galaxies and game adjusted galaxies and galaxies and game adjusted galaxies and game adjusted galaxies and galaxies and game adjusted galaxies and galaxies and game adjusted galaxies and gala</li></ul>	L	periorations.	breath, and dizziness. Accompanying him, his	
<ul> <li>cell (WBC) count, total and drive blinchin, and gamma-glutaders undergoing choicy-steetormy.<sup>1</sup></li> <li>Nemeirr in 1934 was the first to describe and categorize galibadder portradions are acute and constructive size and the servery 4.6 hours x2 weeks without relief.</li> <li>Reported in 1934 was the first to describe and categorize galibadder portradions. Type 3 performations develop the patibadder and develop a surrounding abscass without relief.</li> <li>Past Middical History: Gastrossophagal refux describes and develop a surrounding abscass. Notatives sizes and a vertually lead to a fistulous connection between?</li> <li>Interestingly, there was no difference in mortality amongst the different types.<sup>3</sup></li> <li>As expended, in 36.6% of patients, perforations are acute and magement to foorcho-biliary fistules. Compared to galibadder perforations is a broncho-biliary fistules. The perforation fistule is a compared to galibadder perforations. The perforation fistule compared to galibadder pe</li></ul>	•	Objective findings include tachycardia and elevated white blood	sister states that his skin and eves have changed	
<ul> <li>transferace (GGT) compared to non-perforated galibladders undergoing to holes/setcomy.</li> <li>Niemeier in 1934 was the first to describe and categorize galibladder parforations. Type 1 perforations, the macule and sevely 4-6 hours x2 weeks without relief.</li> <li>Raports taking 1.000 milligrams acatuminophenery 1.200 milligrams acateminophenery 1.200 mi</li></ul>	L			Right Pleural Chest Tube and Intrapleural thrombolysis
<ul> <li>undergoing cholecystectomy.<sup>1</sup></li> <li>Niemeir in 1934 was the first to describe and categorize galibadde perforations. Type 3 perforations are calce and spread into the periformed cavity. Type 2 perforations develop a survoiding abacess, where develops it would be add be add obvelop a survoiding abacess, where a subacet and develop a survoiding abacess, where the galibadder and obvelop a survoiding abacess, where the galibadder and obvelop a survoiding abacess, where the survoiding abacess, where survoiding abacess, where the survoiding abacess, where survoiding abacess, where the survoiding abacess, where survoiding abacess, where the survoid abacess, where survoiding abacess, where survoiding aba</li></ul>	L			
<ul> <li>Niemeier in 1934 was the first to describe and categorize galibiladder perforations. Type 2 perforations, the most common type, are subcaute and develop a surrounding abscess, willed of by perfore and subcautes and develop a surrounding abscess, will do fib years used and develop a surrounding abscess. Type 3 perforations develop the develop develop a surrounding abscess, will do fib years used and develop a surrounding abscess. They a perforations develop the develop develop a surrounding abscess. They a perforations develop the develop a surrounding abscess, will do fib years used and develop a surrounding abscess. They appendix and the transmiss.</li> <li>As expended, in 66.6% of patients, perforations were associated with horielithiass.<sup>1</sup></li> <li>An extremely rare complication of galibiadder perforations, there is a low rindence and lack of consensary around the management of bronch-billary fistulas, making this a fascinating to the 12 parent to the tabulated.</li> <li>Social History: Drinks 10 to 12 peers daily: Smokes 10 to 12 cligarettes daily.</li> <li>Social History: Drinks 10 to 12 cligarettes daily.</li> <li>Social History: Drinks 10 to 12 cligarettes daily.</li> <li>Molecute and the developes around the management of bronch-billary fistulas, making this a fascination of the 12 cligarettes daily.</li> <li>Method the table is the table developed to the table is the table developed to the table is the table date of the table is the table date of the table is the table date of the table is the table date developed to the table is the table date of the table is the table date developed to the table is the table date developed to the table date date developed to the table is</li></ul>	L			
<ul> <li>Nemeir in 1334 was the first to describe and categorize galibladde profrontions. Type J perforations are acute and spread into the performations. Type J perforations are acute and spread into the performation. Type J perforations develops activity. Type J perforations and the develops activity. Type J perforations develops activity. Type J perforations develops activity. Type J perforations and the develops activity. Type J perforations activity activity. Type J perforations activ</li></ul>	L			Confusion secondary to alcohol intoxication
<ul> <li>galloladder perforations. Type 1 perforations, the maximum stream of the peritonel advectory particular, the peritonel advectory a surrounding abscess walled of the peritonel advectory as an other and develop a surrounding abscess walled of the peritonel advectory as no difference in mortality amongst the different types.<sup>3</sup></li> <li>As expacted, in 86 8% of patients, perforations were associated with cholelithiasis.<sup>3</sup></li> <li>As expacted, in 86 8% of patients, perforations were associated with cholelithiasis.<sup>3</sup></li> <li>As expacted, in 86 8% of patients, perforations were associated with cholelithiasis.<sup>3</sup></li> <li>As extended and lack of consensa strough the management of bronch-biliary fistulas, making this a fascinating topic further study.</li> <li>Social History: Dinks 10 to 12 beers daily: Smokes 10 to 12 cigarettes daily: Smokes 10 to 12 cigarettes daily.</li> <li>Bertification of the right lung.</li> <li>Procedure revealed a diaphragmalic defect.</li> <li>Received low-does vasopressors and fluids. Extubated.</li> <li>Acute on chronic anemia treated with packed red blood ce da 2 3 mmolt. (H)</li> <li>Protinomin me 19.9 seconds (H)</li> <li>Na kt mode 23 for UL (H)</li> <li>Total bilingin 1.1 mg/dt (H)</li> <li>Ags 110 UL (H)</li> <li>Ags 110 UL (H)</li> <li>Ags 110 UL (H)</li> <li>Ags 12 for (H)</li> <li>Ald drains removed. Tolerated regular diet.</li> <li>Moderate left plaural effusion requiring thoracentesis.</li> <li>The patient was discharged to skilled nursing facility with four-weet course of amoxicillin-clavulanate 87-125 mg twice daily and fucconace doily.</li> <li>The patient was discharged to by bilary set thorewere output of bilary set removal in 2.3 months.</li> <li>The patient was discharged to by bilary set therewere output of bilar and thorewere output of bilary set torewere.</li> <li>The patient was discharged to by bilary set therewere output of bilary set torewere output of bilary se</li></ul>		Niemeier in 1934 was the first to describe and categorize	every 4-6 hours x2 weeks without relief.	
<ul> <li>Spread into the pertinenal cavity. Type 2 perforations, the most cormon type, are subacture due for success, and develop as uncertain between the galibladder and other viscera, such as the bowel.</li> <li>An extremely rare complication of galibladder perforations is a bronch-biling fistula. Comparison de galibladder perforations is a bronch-biling fistula. Smalle perforations were associated with checklistics.</li> <li>An extremely rare complication of galibladder perforations is a bronch-biling fistula. Smalle perforations is a fascination to the produce fistulated in the stores adaity.</li> <li>Meant management to produce fistulation of galibladder perforations is a fascination to the produce fistulation of galibladder perforations is a fascination to the store in the store is a lower indication and lack of consensus around the management of bronch-biling fistula. Smalle perforations is a fascination to the store is a lower indication and lack of consensus around the management of bronch-biling fistula. Smalle perforations is a fascination to the store is a lower indication and lack of consensus around the management of bronch-biling fistula. Smalle perforations is a fascination to the store is a lower indication and lack of consensus around the management of bronch-biling fistula. Smalle perforations is a fascination to the store is a lower indication and lack of consensus around the management of bronch-biling fistulation fistulation is a fascination to the store is a lower indication and lack of consensus around the management of bronch-biling fistulation. The store is a lower indication and lack of consensus around the fistulation is a fascination to the store is a lower indication and lack of cons</li></ul>				
<ul> <li>common type, are subacute and develop a surrounding abscess willed of the perinoreal adbaces. Type 3 perinoreal adbaces for an other victoriation of a perinoreal adbace performations between the galibladder and other victoriation and the bowl?</li> <li>Interestingly, there was no difference in mortality amongs the different types.<sup>3</sup></li> <li>As expected, in 66.6% of patients, perforations were associated with polyeetomy (pathology report unavelable)</li> <li>Social History: Drinks 10 to 12 beers daily.</li> <li>Meeter indiance and lack of consensus around the management of boncho-bilary fistula. Compared to galibladder perforations, there is a lower indiance and lack of consensus around the management of boncho-bilary fistula. Compared to galibladder perforations, there is a lower indiance and lack of consensus around the management of boncho-bilary fistula. Compared to galibladder perforations, there is a lower indiance and lack of consensus around the management of boncho-bilary fistula. Consensus around the management bilary fistula. Consensus around the management of boncho-bilary fistula. The particulary determines and the development of the operation of the management of boncho-bilary fistula. Consensus around the management bilary fistula. Consensus around the management of boncho-bilary fistula. The particulary determines and the development of the management of boncho-bilary fistula. The particulary dete</li></ul>	L	-	Past Medical History: Gastroesophageal reflux	
<ul> <li>will did off by pertioneal adhesions. Type 3 perforations developed through a deventually lead to a fistulous connection between the galibladder and other viscera, such as the bowel 3 with polyhectomy (patholgy report unavailable)</li> <li>As expected, in 66.6% of patients, perforations were associated with choleithinasis.<sup>3</sup></li> <li>An extremely rate complication of galibladder perforations is a fascination of galibladder perforations is a fascination of galibladder perforations is a fascination of the normality amongs the is a lower incidence and lack of consensus around the management of ballbadder perforations. Is a former of bronch-ohliny fistule. Compared to palbladder perforations is a fascination of galibladder perforations. It is a fascination of the normality and the performance is a lower incidence and lack of consensus around the management of ballbadder perforations. It is a fascination of the normality and the performation of the normality and the performation of the normal treated with performance in the 19.9 seconds (H) NLT. (H) Alaximin 30.9 db(L) NLT. (H) Alaxim</li></ul>	L			Cultures grew Enterococcus, E. coli, Klebsiella, Bacteroide
<ul> <li>chronically and eventually lead to a fisulation connection between the galibadder and other vises?</li> <li>an extremely rare complication of galibladder perforations is a bornch-bility fistula. Compared to galibladder perforations, there is a lower incidence and lack of consensus around the management of bronch-bility fistula. Compared to galibladder perforations, there is a lower incidence and lack of consensus around the management of bronch-bility fistula. Compared to galibladder perforations, there is a lower incidence and lack of consensus around the management of bronch-bility fistula. Compared to galibladder perforations, there is a lower incidence and lack of consensus around the management of bronch-bility fistula. Somethal to a second (H) NR 1.7 (H) Pottmer study.</li> <li>Prostending the seconds (H) NR 1.7 (H) Alk phose 215 UU (H) Lactic Acid 2.3 mmol/L (H) Pottmer study.</li> <li>Prostending the seconds (H) NR 1.7 (H) Alk phose 215 UU (H) Lactic Acid 2.3 mmol/L (H) Pottmer study.</li> <li>Second fistory: Drinks 10 to 12 beers daily: Simokes 10 to 12 cigareties daily.</li> <li>Second retrograde cholangiopancreatography (ERCP) Alk phose 215 UU (H) Lactic Acid 2.3 mmol/L (H) Pottmer study.</li> <li>Figure 11 Computed function of the galibladder with the stores remaining present.</li> <li>Second retrograde cholangiopancreatography (ERCP) Alk phose 215 UU (H) ALT 168 UU (H) ALT 168 UU (H) Lipse 8 UL (L)</li> <li>All drains removed. Tolerated regular diet.</li> <li>Moderate left pleural effusion requiring thoracentesis.</li> <li>Tradition the galibadder with the stores remaining present.</li> <li>Second retrograde cholangiopancreatography (ERCP) Alk phose 215 UU (H) ALT 168 UU (H) AL</li></ul>	L			
<ul> <li>Health maintained the subscreament of broncho-bilary fistulas, making this a fascinatory for further study.</li> <li>Social History: Drinks 10 to 12 beers daily: Smokes 10 to 12 cigarettes daily.</li> <li>Social History: Drinks 10 to 12 beers daily: Smokes 10 to 12 cigarettes daily.</li> <li>Social History: Drinks 10 to 12 cigarettes daily.</li> <li>Definition 11 mg/dL (H)</li> <li>All drains removed. Tolerated regular diet.</li> <li>Moderate left pleural effusion requiring thoracentesis.</li> <li>Discontruit of the gailbadder with the stores remaining present informace stores of amoxidin-ciavulante at 287-125 mg twice daily and fuctoracid 400mg once daily.</li> <li>The patient was discharged to skilled nursing facility with four-wee course of amoxidin-ciavulante strang facility with fou</li></ul>	L			Piperacillin/tazobactam and fluconazole initiated
<ul> <li>Interestingly, there was no difference in mortality amongst the different types.<sup>3</sup></li> <li>As expected, in 86.6%, of patients, perforations were associated with cholelithiasis.<sup>3</sup></li> <li>An extremely rare complication of galibadder perforations is a bronch-biling fistula. Compared to galibadder perforations, there is a lower incidence and lack of consensus around the management of bronch-biling fistula. Second History: Drakes 10 to 12 cigarettes daily.</li> <li>Social History: Drakes 10 to 12 cigarettes daily.</li> <li>History: Drakes 10 to 12 cigarettes daily.</li> <li>History: Drakes 10 to 12 cigarettes daily.</li> <li>History: Drakes 10 to 12 cigarettes daily.</li>     &lt;</ul>	L		Health maintenance: Last colonoscopy January	
<ul> <li>different types.<sup>3</sup></li> <li>As expected, in 86.8% of patients, perforations were associated with cholibriasis.<sup>3</sup></li> <li>An extremely rare complication of galibladder perforations, there is a lower incidence and lack of consensus around the galibladder perforations, there is a lower incidence and lack of consensus around the galibladder perforations is a broncho-biliary fistulas. Compared to galibladder perforations, there is a lower incidence and lack of consensus around the galibladder perforations. There is a lower incidence and lack of consensus around the galibladder perforations is a broncho-biliary fistulas, making this a fascinating topic for further study.</li> <li><b>Definition 11</b>, mg/dL (H) Also lots Neutrophils 20.2 K/lu (H) Absolute Neu</li></ul>	L		2021 with polypectomy (pathology report	
<ul> <li>As expected, in 86 % of patients, perforations were associated with cholelithiasis.<sup>3</sup></li> <li>An extremely rate complication of galibladder perforations is a broncho-bilitry fistula. Compared to galibladder perforations, there is a lower incidence and lack of consensus around the management of broncho-bilitry fistulas, making this a fascinating by the C3 7 k/dL (H)</li> <li>As expected, in 86 % of patients, perforations were associated with posterior of the study.</li> </ul> Perfinent Diagnostic Findings WBC 23 7 k/dL (H) Acute on chronic anemia treated with packed red blood certains of the right and the perforation is a broncho-bilitry fistulas, making this a fascinating by the C3 7 k/dL (H) Acute on chronic anemia treated with packed red blood certains of the right and the performance of the reduction of the right and the performance of the reduction of the right and the performance of the reduction of the right and the right and the right and the reduction of the right and the reduction of the right and the right and the right and the reduction of the right and theright and the right and therit and the right and the right an	L		unavailable)	
<ul> <li>Social History: Drive of patients, ponotability field addocting of patients, ponotability addocting of patients, ponota</li></ul>	L	unerent types.*	,	
<ul> <li>with cholelithiasis.<sup>3</sup></li> <li>An extremely rare complication of gallbladder perforations is there is a lower incidence and lack of consensus around the management of broncho-biliary fistulas, making this a fascination topic for further study.</li> <li>Median far greennal</li> <li>Median far greennal<!--</td--><td></td><td>As expected, in 86.6% of patients, perforations were associated</td><td>- Social History Drinks 10 to 12 hours doily</td><td></td></li></ul>		As expected, in 86.6% of patients, perforations were associated	- Social History Drinks 10 to 12 hours doily	
<ul> <li>An extremely rare complication of gallbladder perforations, is a broncho-biliary fistula. Compared to gallbladder perforations, there is a lower incidence and lack of consensus around the management of broncho-biliary fistulas, making this a fascinating topic for further study.</li> <li>Med 23.7 k/ul. (H) Absolute Neutrophils 20.2 k/ul. (H) Lactic Acid 2.3 mm/ul. (H) Protromotin time 19.3 seconds (H) INR 1.7 (H) Albumin 3.0 g/dL (L) Total bilirubin 1.1 mg/dL (H) Aks for the source source of an except second seconds (H) INR 1.7 (H) Albumin 3.0 g/dL (L) Total bilirubin 1.2 mg/dL (H) Compared for the source straining are source of the sou</li></ul>	L			Day #11 • Procedure revealed a diaphragmatic defect.
<ul> <li>broncho-biliary fistula. Compared to galibladder perforations, there is a lower incidence and lack of consensus around the management of broncho-biliary fistulas, making this a fascinating topic for further study.</li> <li>Pertinent Diagnostic Findings</li> <li>WBC 23.7 k/uL (H)</li> <li>Absolute Neutrophils 20.2 k/uL (H)</li> <li>Lactic Acid 2.3 mm0/L (H)</li> <li>Protinomin time 19.9 seconds (H)</li> <li>INR 1.7 (H)</li> <li>Absolute S15 U/L (H)</li> <li>Cata dramage at the structure of the structu</li></ul>	L		Smokes 10 to 12 cigarettes daily.	
<ul> <li>there is a lower incidence and lack of consensus around the management of broncho-biliary fistulas, making this a fascination topic for further study.</li> <li>WBC 23.7 k/uL (H)</li> <li>Absolute Neutrophilis 20.2 k/uL (H)</li> <li>Lactic Acid 2.3 mmol/L (H)</li> <li>Prothrombin time 19.9 seconds (H)</li> <li>INR 1.7 (H)</li> <li>Albumin 3.0 g/dL (L)</li> <li>Total bilirubin 2.1 mg/dL (H)</li> <li>Ak phose 215 U/L (H)</li> <li>All drains removed. Tolerated regular diet.</li> <li>Moderate left pleural effusion requiring thoracentesis.</li> <li>WBC 23.7 k/uL (H)</li> <li>All drains removed. Tolerated regular diet.</li> <li>Moderate left pleural effusion requiring thoracentesis.</li> </ul>	•			
<ul> <li>management of broncho-biliary fistulas, making this a fascinating topic for further study.</li> <li>Absolute Neutrophils 20.2 k/uL (H) Lactic Acid 2.3 mmol/L (H) Proferombin time 19.9 seconds (H) INR 1.7 (H)</li> <li>Proferombin 1.0 mg/dL (H) AST 101 U/L (H) AST 101 U/L (H) AST 101 U/L (H) Lipase 8 U/L (L)</li> <li>Electrometer for summer entered desinger unit rate is cleared for summer enterement enterement desinger unit rate is cleared for summer enterement entement enterement enterement enterement enterem</li></ul>	L		Pertinent Diagnostic Findings	Received low-dose vasopressors and fluids. Extubated.
<ul> <li>interval of turther study.</li> <li>Lactic Acid 2.3 mmol/L (H)</li> <li>Prothrombin time 19.9 seconds (H)</li> <li>NR 1.7 (H)</li> <li>Albumin 3.0 gdd(L)</li> <li>Albumin 3.0 gdd(L)</li> <li>NR 1.7 (H)</li> <li>Albumin 3.0 gdd(L)</li> <li>Albumin 4.0 gdd(L)</li> <li>Albumin 4.0 gdd(L)</li> <li>Albumin 4.0 gdd(L)</li> <li>Albumin 4.0 gdd(L)</li> <li>Al</li></ul>	L		WBC 23.7 k/uL (H)	<ul> <li>Day</li> <li>Acute on chronic anemia treated with packed red blood ce</li> </ul>
<ul> <li>Prothrombin time 19. seconds (H) INR 1.7 (H) Operstudiegical drainage</li></ul>	L		Absolute Neutrophils 20.2 k/uL (H)	#12-17
<ul> <li>Find a precedular function of the p</li></ul>	L	topic for further study.		
<ul> <li>No</li> <li>Vrs</li> <li>Openstradiegiel damage</li> <li>Findagem</li> <li>Findagem</li> <li>Comparison of the state of the stat</li></ul>	Г		Prothrombin time 19.9 seconds (H)	Fada a serie estre en de ale alemaior en este este ha (FDOD)
<ul> <li>All drains removed. Tolerated regular diet.</li> <li>All drains removed. Tolerated regular diet.</li> <li>All drains removed. Tolerated regular diet.</li> <li>Moderate left pleural effusion requiring thoracentesis.</li> <li< td=""><td>L</td><td>Patient fit at presentation</td><td></td><td></td></li<></ul>	L	Patient fit at presentation		
<ul> <li>Figure 1: Proposed algorithm for managing type II gallbladder perforators</li> <li>Direct billrubin 1.1 mg/dL (H) Alk phos 215 U/L (H) AST 101 U/L (H) ALT 168 U/L (H) Lipase 8 U/L (L)</li> <li>All drains removed. Tolerated regular diet.</li> <li>Moderate left pleural effusion requiring thoracentesis.</li> <li>Moderate left pleural effusion requiring thoracent</li></ul>	L	No Yes		Day #18 • Sphinclerolomy with balloon sweep and metal stends place
<ul> <li>Alk phos 215 U/L (H) AST 101 U/L (H) Lipase 8 U/L (L)</li> <li>Alk phos 215 U/L (H) AST 101 U/L (H) Lipase 8 U/L (L)</li> <li>Alk phos 215 U/L (H) AST 101 U/L (H) Lipase 8 U/L (L)</li> <li>Alk phos 215 U/L (H) AST 101 U/L (H) Lipase 8 U/L (L)</li> <li>Alk phos 215 U/L (H) AST 101 U/L (H) Lipase 8 U/L (L)</li> <li>Alk phos 215 U/L (H) AST 101 U/L (H) Lipase 8 U/L (L)</li> <li>Alk phos 215 U/L (H) AST 101 U/L (H) Lipase 8 U/L (L)</li> <li>Alk phos 215 U/L (H) AST 101 U/L (H) Lipase 8 U/L (L)</li> <li>Alk phos 215 U/L (H) AST 101 U/L (H) Lipase 8 U/L (L)</li> <li>Alk phos 215 U/L (H) AST 101 U/L (H) Lipase 8 U/L (L)</li> <li>Alk phos 215 U/L (H) AST 101 U/L (H) Lipase 8 U/L (L)</li> <li>Alk phos 215 U/L (H) AST 101 U/L (H) Lipase 8 U/L (L)</li> <li>Alk phos 215 U/L (H) AST 101 U/L (H) Lipase 8 U/L (L)</li> <li>Alk phos 215 U/L (H) AST 101 U/L (H) Lipase 8 U/L (L)</li> <li>Alk phos 215 U/L (H) AST 101 U/L (H) Lipase 8 U/L (L)</li> <li>Alk phos 215 U/L (H) AST 101 U/L (H) Lipase 8 U/L (L)</li> <li>Alk phos 215 U/L (H) AST 101 U/L (H) Lipase 8 U/L (L)</li> <li>Alk phos 215 U/L (H) AST 101 U/L (H) Lipase 8 U/L (L)</li> <li>Alk phos 215 U/L (H) Lipase 8 U/L (H)</li> <li>Alk phos 215 U/L (H)</li></ul>	L	Open/radiological drainage		
<ul> <li>AST 101 U/L (H) ALT 168 U/L (H) Lipase 8 U/L (L)</li> <li>AST 101 U/L (H) ALT 168 U/L (H) Lipase 8 U/L (L)</li> <li>AST 101 U/L (H) ALT 168 U/L (H) Lipase 8 U/L (L)</li> <li>AST 101 U/L (H) ALT 168 U/L (H) Lipase 8 U/L (L)</li> <li>Moderate left pleural effusion requiring thoracentesis.</li> <li>Moderate left pleural effusion requiring thoracentesis.<td>L</td><td></td><td></td><td></td></li></ul>	L			
<ul> <li>Figure 1: Proposed algorithm for managing type II gallbladder perforations</li> <li>Moderate left pleural effusion requiring thoracentesis.</li> </ul>	L			All drains removed. Televated regular dist
Figure 1: Proposed algorithm for managing type II galibladder perforations Hind Bolt (II) Eigure 1: Proposed algorithm for managing type II galibladder perforations Hind Bolt (II) Hind Bolt (III) Hind Bol	L	Fistulogram	AST 101 U/L (H)	
Lipase 8 U/L (L) Lipase 8 U/L	L			#23-30
Figure 1: Proposed algorithm for managing type II gallbladder perforations Figure 1: Proposed algorithm for managing type II gallbladder perforations Outcome Outcome • Upon discharge, patient had an elevated white count (14.3), low hemoglobin (7.7), and low hematocrit (24.8). • The patient first was discharged to skilled nursing facility with four-week course of amoxicillin-clavulanate 875-125 mg twice daily and fluctonazole 400mg once daily. • He had multiple follow-up visits with thoracic surgery, general surgery, infectious disease, and gastroenterology. Awaiting cholecystectomy followed by biliary stent removal in 2-3 months.	L		Lipase 8 U/L (L)	
Removal of stones + stenting at ERCP       Removal of stones + stenting at ERCP       Figure 1: Proposed algorithm for managing type II gallbladder perforations	L			
Removal of stones + stenting at ERCP       Removal of stones + stenting at ERCP       Figure 1: Proposed algorithm for managing type II gallbladder perforations	L			
Removal of stones + stenting at ERCP       Removal of stones + stenting at ERCP       Figure 1: Proposed algorithm for managing type II gallbladder perforations	L	ERCPMRCP	Activity of the second	
<ul> <li>stenting at ERCP</li> <li>If cholecystocutaneous fistula, continue external drainage until tract is closed</li> <li>Mo</li> <li>Figure 1: Proposed algorithm for managing type II gallbladder perforations</li> </ul>	L			Outcome
<ul> <li>stenting at ERCP</li> <li>If cholecystocutaneous fistula, continue external drainage until tract is closed</li> <li>Mo</li> <li>Figure 1: Proposed algorithm for managing type II gallbladder perforations</li> </ul>	L	Removal of stones +		Upon discharge, patient had an elevated white count (14.3) low
<ul> <li>If cholecystocutaneous fistula, continue external drainage until tract is closed</li> <li>Patient fit?</li> <li>Patient fit?</li> <li>Yes</li> <li>Open/aparoscopic cholecystectomy</li> <li>Figure 1: Proposed algorithm for managing type II gallbladder perforations</li> </ul>	L			
Patient fit?       Yes         No       Yes         No further treatment       Open/Japaroscopic cholecystectomy         Figure 1: Proposed algorithm for managing type II gallbladder perforations       Open/Japaroscopic cholecystectomy	L			
Patient fit?       Yes         No       Yes         No further treatment       Open/Japaroscopic cholecystectomy         Figure 1: Proposed algorithm for managing type II gallbladder perforations       Open/Japaroscopic cholecystectomy	L	<u>+</u>		The metion to an all all and the shills down in a facility with favor one
Patient fit?       Yes         No       Yes         No further treatment       Open/laparoscopic cholecystectomy         Figure 1: Proposed algorithm for managing type II gallbladder perforations       Image 1: Computed Tomography (CT) Abdomen Pelvis         With Intravenous (IV) Contrast.       • Gas-filled gallbladder with the stones remaining present in the gallbladder lumen.         • Discontinuity of the gallbladder wall communicating with a large perihepatic collection containing gas and fluid       • He had multiple follow-up visits with thoracic surgery, general surgery, infectious disease, and gastroenterology. Awaiting cholecystectomy followed by biliary stent removal in 2-3 months.	L	If cholecystocutaneous fistula, continue external drainage until tract is closed		
Patient fit?       Yes         No       Yes         No further treatment       Open/laparoscopic cholecystectomy         Figure 1: Proposed algorithm for managing type II gallbladder perforations       With Intravenous (IV) Contrast.         •       Gas-filled gallbladder with the stones remaining present in the gallbladder lumen.         •       Discontinuity of the gallbladder wall communicating with a large perihepatic collection containing gas and fluid				
<ul> <li>Second algorithm for managing type II gallbladder perforations</li> <li>Gas-filled gallbladder with the stones remaining present in the gallbladder lumen.</li> <li>Gas-filled gallbladder with the stones remaining present in the gallbladder wall communicating with a large perihepatic collection containing gas and fluid</li> <li>He had multiple follow-up visits with thoracic surgery, general surgery, infectious disease, and gastroenterology. Awaiting cholecystectomy followed by biliary stent removal in 2-3 months.</li> </ul>		+		fluconazole 400mg once daily.
<ul> <li>Figure 1: Proposed algorithm for managing type II gallbladder perforations</li> <li>in the gallbladder lumen.</li> <li>Discontinuity of the gallbladder wall communicating with a large perihepatic collection containing gas and fluid</li> <li>He had multiple follow-up visits with thoracic surgery, general surgery, infectious disease, and gastroenterology. Awaiting cholecystectomy followed by biliary stent removal in 2-3 months.</li> </ul>				
No further treatment       Open/laparoscopic cholecystectomy       Open/laparoscopic cholecystectomy       Open/laparoscopic cholecystectomy       Open/laparoscopic cholecystectomy       Surgery, infectious disease, and gastroenterology. Awaiting         Figure 1: Proposed algorithm for managing type II gallbladder perforations       Discontinuity of the gallbladder wall communicating gas and fluid       surgery, infectious disease, and gastroenterology. Awaiting		No Yes		He had multiple follow-up visits with thoracic surgery, general
Figure 1: Proposed algorithm for managing type II gallbladder perforations a large perihepatic collection containing gas and fluid cholecystectomy followed by biliary stent removal in 2-3 months.		No further treatment Open/laparoscopic cholecystectomy		
The set of	$\mathbf{F}$			
				chologystostorry renewed by bindry sterit removal in 2-5 months.





		Discussion
	Objective Findings	This case report demonstrates a type 2 Niemeier perforation
	Blood pressure: 94/54 mmHg	complicated by a right broncho-biliary fistula.
	Heart rate: 112 beats per minute	CT was an appropriate diagnostic modality. Confirmed and
spital	Temperature: 98.1 degrees Fahrenheit	suspected perforations are more often found on CT rather than
opital	Respiratory rate: 17 breaths per minute	abdominal ultrasound in those with acute gallbladder
and	Pulse oximetry: 96% on room air	perforations. <sup>1</sup> Additionally, case reports of broncho-biliary fistulas
	Body mass index: 28.98 kg/m <sup>2</sup>	show that complete blood count, comprehensive metabolic panel
		CT, and ERCP were appropriate at making the diagnosis. <sup>4</sup>
	<ul> <li>Patient was ill-appearing but not in acute</li> </ul>	• The management was consistent with Figure 1, an algorithm for
	distress. Lethargic.	type 2 perforations proposed by a systematic review. <sup>3</sup>
		There is not a standard treatment for broncho-biliary fistulas.
	Scleral icterus, generalized jaundice, and	However, the patient in this case study was treated successfully
	pale skin present. No ecchymoses or rashes.	with non-surgical drainage procedures, which is consistent with
	Mucus membranes were dry.	the following studies.
oides,		• A February 2021 study discusses two case reports of broncho-
	No signs of respiratory distress. Expiratory	biliary fistulas. The first was an 80-year-old male with a history of
	wheezing and diminished breath sounds	diabetes, alcohol use, and hepatocellular carcinoma. He was
	bilaterally.	treated non-surgically with drainage procedures and survived.
		The second patient was a 68-year-old female with a history of
	• Normal rate and regular rhythm. No murmurs,	cirrhosis, hepatitis C, and hepatocellular carcinoma. In addition to
	rubs, gallops.	drainage, she was treated surgically with bronchial occlusion and
		percutaneous transhepatic portal vein embolization but
	Abdomen soft and <b>distended</b> . Normative bowel	eventually died.4
•	sounds. Tympanic to percussion. Generalized	• In the future, the treatment of broncho-biliary fistulas may include
cells.	abdominal tenderness that intensified in the	material to block fistulous drainage into the lungs, as described in
	epigastric and right upper quadrant (RUQ)	a November 2023 case report. A broncho-biliary fistula found in a
	regions	63-year-old male with a history of metastatic colon cancer was
CP)	No succeita a construct No OVA too down and	treated with the Amplatzer Vascular Plug inserted into the
aced.	No guarding or rebound. No CVA tenderness	bronchus. There was successful control of biliary leakage into the
	bilaterally. Negative psoas, negative obturator.	lung. <sup>5</sup>
	Tremors of the hands bilaterally with	
	movement. A/Ox4. No focal deficits. No	Conclusion
	peripheral ataxia, asterixis, or spasticity.	Clinicians should suspect gallbladder perforations in ill-
	p = p =	appearing patients presenting with epigastric/RUQ abdominal
	Remainder of the exam unremarkable.	pain, fevers, N/V/D, and jaundice.
		Broncho-biliary fistulas are a rare complication of gallbladder
	A CONTRACT OF A	perforations. In the few cases reported, treatment always
		includes drainage procedures.
w		Despite the successful outcome of this case report, future research is necessary to reduce complications and hospital
	BILL TOP MAL	stays in patients with gallbladder perforations.
un al i		
week		Defe
	Image 2: Magnetic Resonance Imaging (MRI)	References
	<ul> <li>Abdomen with and without IV contrast</li> <li>Cholelithiasis, Choledocholithiasis</li> </ul>	1. Albisher HM, Foula MS, Alghusnah ES, Abdelhafiz T. Risk factors and outcomes in acute perforated gallbladder: a retrospective cohort study. Asian J Surg. 2023;46(6):2299-2303. doi:10.1016/j.asjsur.2022.09.109
	Gas in the gallbladder with fistulous connection to the	<ol> <li>Niemeier OW. Acute free perforation of the gall-bladder. Ann Surg. 1934;99(6):922-924. doi:10.1097/00000658-193499060-00005</li> <li>Date RS, Thrumurthy SG, Whiteside S, et al. Gallbladder perforation: case series and systematic review. Int J Surg.</li> </ol>
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