Nursing Compendium Paper: Cholecystitis

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Abstract

Cholecystitis is a common and potentially recurring health problem that affects the patient's gastrointestinal and hepatobiliary systems. This essay will go over modern treatment modalities and nursing care that can help treat patients suffering from cholecystitis

Cholecystitis is a common health problem that has afflicted millions of patients over the years, normally caused by the formation of gallstones. Cholecystitis is a common enough health issue that significant amounts of treatment and nursing care has been developed provide relief for patients afflicted with this disease process. This essay will explore modern treatment and nursing care for this disease process.

Under normal circumstances, the gallbladder is supposed to store bile produced from the liver (2019). This bile is utilized so that the body can digest fats and fat-soluble vitamins, as well as to get rid of broken-down red blood cell products known as bilirubin (2019) However, there are conditions when the gallbladder isn't allowed to properly function, in which case cholecystitis occurs. Cholecystitis is primarily caused by gallbladder stones obstructing the gallbladder, though other causes such as fluid and electrolyte balance, biliary stasis, or increased biliary thickness can also cause cholecystitis (Belleza, 2021). Due to these conditions, inflammation of the gallbladder occurs, causing the patient to experience pain and abdominal tenderness, and abdominal rigidity in the upper-right abdominal quadrant, as well as abdominal bloating (Hinkle et al., 2022). In the right conditions, cholecystitis can cause perforation or gangrene to occur (Hinkle et al., 2022). Perforation of the gallbladder is especially dangerous, as it can lead to peritonitis (Rao et al., 2022). While bacteria usually are not causes of cholecystitis, they may cause further complications related to cholecystitis such as infections and increased white blood cell counts, such as the aforementioned peritonitis (Belleza, 2021). Aside from the aforementioned pain and abdominal symptoms, other signs and symptoms of cholecystitis of note would have to include Murphy's sign, in which the patient holds their breath during palpation of the right midclavicular abdominal area, fever, and fatty stools, as well as biliary symptoms such as jaundice and darkened urine (2019).

One of the most important treatment modalities for cholecystitis happens to be laparoscopic cholecystectomy (Sato et al., 2022). However, one major concern for this form of treatment is the increasing population of patients in whom major surgical intervention such as laparoscopy cholecystectomy is associated with significant comorbidities that make it far less viable (Sato et al., 2022). Therefore, one major developing treatment modality in development is gallbladder drainage via the insertion of a stent, with a unique spiral-shaped stent to be inserted via endoscopic transpapillary gallbladder stenting, which itself is performed instead of cholecystectomy via the use of endoscopic retrograde cholangiopancreatography (Sato et al., 2022). The study suggested that in the short term, these spiral stents, which were used over traditional stents in order to improve drainage, were incredibly effective in the short term in relieving the cholecystitis of these patients with a reported ninety-seven percent success rate, with only mild post-operative side effects affecting patients (Sato et al., 2022). However, there were a notable number of late-term effects on a number of patients, such as recurring cholecystitis, stent migration, and penetration of the duodenum; only half of the patients were properly followed-up, and only a third of those followed-up patients suffered from late adverse effects, but there were notable side effects with the population that utilized this treatment modality (Sato et al., 2022).

Also, pertaining to alternative treatment modalities to laparoscopic cholecystectomy, another form of surgical intervention is percutaneous cholecystotomy (Park et al., 2019). While this procedure has been utilized more as a precursor treatment modality between patient stabilization and cholecystectomy, standalone percutaneous cholecystotomy has been considered an alternative to laparoscopic cholecystectomy in patients with significantly higher amounts of comorbidities or risk factors related to cholecystectomy, (Park et al., 2019). In fact, the mortality

rate for this procedure is described as less than one-fiftieth, according to one study (Park et al., 2019). However, this study notes that this mortality rate drastically increased in patients with significantly high higher amounts of comorbidities, all the way up to eighteen percent (Park et al., 2019). In addition to this, the recurrence rate of acute cholecystitis varies wildly, ranging from four percent all the way up to twenty-two percent, though this is due to these patients having significant comorbidities, and the study notes that the other related studies aren't distinguishing the recurrence rates as being caused by said comorbidities or merely the recurrence of gallbladder stones (Park et al., 2019). Nevertheless, this study has proved that percutaneous cholecystotomy has high amount of potential as a treatment modality for cholecystitis.

However, that is not to say that laparoscopic cholecystectomy is not viable anymore. On the contrary, laparoscopic cholecystectomy is still the most common treatment modality for cholecystitis (Rao et al., 2022). In fact, it is still considered the first option for cholecystitis treatment (Park et al., 2019). Laparoscopic cholecystectomy replaced the previously common open cholecystectomy treatment modality after the latter had proven to be impractical due to significant trauma and bleeding, as well as higher incidences of infection (Rao et al., 2022). One study suggested that laparoscopic cholecystectomy is highly effective in reducing post-operative hospital stays, postoperative bleeding, and shorter times in surgery (Rao et al., 2022). Additionally, laparoscopic cholecystectomy has a significantly lower rate of infection and postoperative injury, and complications in comparison to open cholecystectomy (Rao et al., 2022). Despite this, and as stated earlier, the same study has shown that laparoscopic cholecystectomy is still impractical for more complicated cases with more comorbidities, and can lead to further complications than other treatment modalities (Rao et al., 2022). However,

even with its impracticality with more complicated cases, laparoscopic cholecystectomy is still considered the primary treatment modality for patients undergoing cholecystitis, and the procedure's short postoperative recovery time makes it ideal for non-complicated cases (Rao et al., 2022). However, no procedure by itself will help patients recover from cholecystitis, nursing care is needed for proper patient recovery.

Nursing treatment is largely dependent on the symptoms and the severity of said symptoms (Belleza, 2021). The patient is to be kept NPO and then advanced towards clear liquids progressing towards more advanced diets with low fat and cholesterol as per the primary care physician's orders, in order to rest the patient's gastrointestinal system (*Cholecystitis Nursing nclex review,* 2019). Instead of providing any oral intake of foods, an IV will be started and the patient will be put on IV fluids in order to A nasogastric tube may be inserted in order to decompress the GI system and remove any stomach contents (*Cholecystitis Nursing nclex review*, 2019). Pain, nausea, vomiting and potentially even infection are also major symptoms of cholecystitis, so antibiotics, analgesics, and antiemetics are prescribed by the primary care physician, (*Cholecystitis Nursing nclex review*, 2019). Anti-inflammatories such as tylenol can also control inflammation (Belleza, 2021). Labs such as CT scans, Hepatobiliary scans, abdominal x-rays, complete blood counts, serum bilirubin levels, serum liver enzymes such as AST and ALT, cholecystographies, endoscopic retrograde cholangiopancreatographies, and even MRIs are performed in order to help diagnose cholecystitis (Belleza, 2021). However, most patient care is largely dependent on postoperative care for major surgeries such as drain insertion, and the utilization of an endoscopic retrograde cholangiopancreatography in order to perform a cholecystectomy; monitoring drainage and drain wounds falls on the responsibility of the nurse under these circumstances (*Cholecystitis Nursing nclex review*, 2019). In addition, it

should be noted that nursing care alone isn't as efficient towards patient recovery and quality of life than a multidisciplinary approach (Lu et al., 2022). A multidisciplinary team approach to patient care has significantly better patient outcomes and higher quality of life in patients in comparison to a solitary hierarchal nursing management approach; it is better for patient outcomes when the nursing team collaborates with the rest of the multidisciplinary team when it comes to patient outcomes (Lu et al., 2022). One study suggested that the multidisciplinary team approach can fully integrate care for patients suffering from cholecystitis.

Cholecystitis is a common, yet very treatable disease process. While it can cause significant distress for the patient, modern treatment and nursing care can help mitigate suffering and maximize recovery for the patient. With advancing medical technology and treatment modalities, while cholecystitis will never be truly eliminated, it can be treated more and more effectively until suffering is practically nonexistent.

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