

## Acute pancreatitis: surgery and interventional extensive care.

Jack Wilson\*

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### Acute Pancreatitis

In recent years, the focus of therapy for severe acute pancreatitis has moved from immediate surgery to rigorous intensive care. While conservative therapy is recommended in the early stages of the disease, surgery may be considered in the later stages. The “gold standard” for treating infected pancreatic and peripancreatic necrosis is still surgical debridement. Over the last several decades, advances in radiological imaging, interventional radiology, and other limited access treatments have revolutionised the care of a variety of surgical diseases. Endoscopic Retrograde Cholangiopancreatography (ERCP) and sphincterotomy, Fine Needle Aspiration For Bacteriology (FNAB), percutaneous or endoscopic drainage of peripancreatic fluid collections, pseudocysts, and late abscesses are only a few of the interventional treatment options, as well as selective angiography and catheter-directed embolisation of acute pancreatitis-related bleeding problems, have long been accepted as diagnostic and therapeutic gold standards in the treatment of acute pancreatitis. Because of recent technological advances in interventional treatment and minimally invasive surgery, infected pancreatic necrosis has been effectively treated in a small number of individuals. Technical feasibility, on the other hand, does not exclude competent clinical judgement. In the absence of well-designed clinical studies, we must exercise caution when using new technology. Thus, minimally invasive surgery and interventional treatment for infected necrosis should be restricted to clinical trials and particular reasons in severely sick patients who are otherwise unfit for traditional surgery.

Over the last few decades, the therapy of acute pancreatitis has been contentious, ranging from a cautious medicinal strategy on the one side to an aggressive surgical approach on the other. Over the last decade, we've learned a lot more about the natural course and pathogenesis of acute pancreatitis. Acute pancreatitis can range from a minor transient condition to a severe necrotising illness. The majority of acute pancreatitis episodes (80%) are mild and self-limiting, resolving spontaneously within 3–5 days. Mild pancreatitis patients react effectively to medical therapy, requiring just intravenous fluid resuscitation and analgesics. Severe pancreatitis, on the other hand, is characterised as pancreatitis accompanied with organ failure and/or local consequences such as necrosis, abscess development, or pseudocysts. Severe pancreatitis can be found in 15%–20% of all cases.

Severe pancreatitis often progresses in two stages. The

Systemic Inflammatory Response Syndrome (SIRS) manifests itself in the first two weeks after the beginning of symptoms. Proinflammatory mediator release is considered to have a role in the development of SIRS-related pulmonary, cardiovascular, and renal dysfunction. Pancreatic necrosis, on the other hand, develops to its full extent during the first four days after the beginning of symptoms. Although SIRS can be seen in the early stages of acute pancreatitis without substantial pancreatic necrosis, the majority of patients with severe early organ failure will show pancreatic necrosis on Computed Tomography (CT) scan. Late worsening of organ dysfunction most often occurs in the second to third week following admission and is usually caused by subsequent infection of pancreatic or peripancreatic necrosis. Today, pancreatic necrosis infection is still the leading cause of sepsis-related multiple organ failure and the most serious consequence of severe acute pancreatitis. Infection of pancreatic necrosis can be seen in 40%–70% of necrotising disease patients. The risk of infection grows in direct proportion to the degree of intra- and extrapancreatic necrosis. The treatment of acute pancreatitis differs depending on the stage of the disease. Treatment of severe acute pancreatitis has evolved away from early surgical debridement/necrosectomy and toward aggressive intensive medicinal therapy in recent years. While conservative therapy is used in the early stages of the disease, surgery must be considered in the later stages.

Over the last several decades, advances in radiological imaging, new discoveries in interventional radiology, and other limited access treatments have transformed the management of numerous surgical diseases. Today, it is advised that severe acute pancreatitis be treated in specialist facilities with on-site multidisciplinary competence, such as critical care experts, interventional endoscopists, diagnostic and interventional radiologists, and surgeons. This paper examines the current role of surgery and interventional intensive care in the management of severe acute pancreatitis, taking into account recent advancements in interventional therapy regimens.

#### \*Correspondence to:

Jack Wilson  
Editorial Office  
Journal of Advanced Surgical Research  
London  
United Kingdom  
E-mail: wilsonjmed..@gmail.com