

first postoperative day when the patients were in stable conditions (hemodynamics, fluid balance, etc.).

When the study was projected (1991), little was known about IGF-1 treatment in postoperative patients and the impact on plasma hormone levels. It was hypothesized that growth hormone resistance in critically ill patients could be overcome by IGF-1 treatment.²

Measurements of growth hormone concentrations afford close intervals of probe sampling (20 minutes) to evaluate changes in the absolute plasma hormone levels and changes in the oscillatory secretion mode. In addition to costs of such amount of determinations, our ethical committee would have objected to draw large amounts of blood from our patients. From a scientific point of view, I agree that detailed hormonal patterns would have been a desirable information.

Measurements of protein synthesis and breakdown and protein oxidation would have afforded invasive methods and tracer techniques that were not available at our hospital. Thus, we had to apply simple methods that could be performed on a peripheral ward. Urinary 3-methylhistidine (3-MH) excretion still is an accepted non-invasive parameter to evaluate muscle protein breakdown.

Rennie and coworkers³ showed that skeletal muscle contributes only in part to 3-MH excretion in postoperative patients. However, he extrapolated skeletal muscle 3-MH liberation over 24 hours (arteriovenous concentration gradient) from one measurement and compared it with urinary 3-MH excretion. Moreover, patients had different diseases and surgical procedures and no standardized nutritional input and medical treatment (e.g., steroids). However, Neuhäuser⁴ showed that 3-MH excretion is affected by the dietary nitrogen input. This must be considered when discussing objections to taking urinary 3-MH losses as an acceptable marker for muscle proteolysis.

References

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Dear Editor:

The article by Horrovich et al.¹ on postoperative complications after splenectomy for hematologic malignancies describes a fairly typical experience in terms of mortality, pancreatic injury, wound problems, and pulmonary complications. The one area in which

there is a significant variation from previous studies is in the high subphrenic abscess rate of 5%. It is difficult to attribute this complication to any one cause, but there is no doubt, as the authors have indicated, that concomitant pancreatic injury must be a factor. The role of drainage of the splenic bed in preventing this complication is controversial because there are many different mechanisms for abdominal drainage. Some, such as corrugated drains, undoubtedly can act as a portal for ascending infection from the skin surface, whereas others such as high pressure suction drains are ineffective. In 1985, we demonstrated in a larger series of patients undergoing splenectomy for hematologic malignancy (282 in 6 years) that subphrenic abscess almost could be eliminated by the use of low-pressure suction drainage incorporating a none return valve.²

In our series, we had only two atypical subphrenic abscesses, *i.e.*, a rate of 0.71%. One of these required only digital drainage of an abscess in the epigastric end of a midline wound and was only described as a subphrenic abscess because it extended from the epigastrium under the diaphragm for a short distance. The second was a typical subphrenic abscess that presented 3 months after operation.

It is unlikely that the difference in subphrenic abscess rate between these two series was due to any technical surgical factors and therefore probably is related to the effective removal from the splenic bed of fluid with a high amylase content that was found even in the absence of overt pancreatic injury. I believe that our study demonstrated that postsplenectomy subphrenic abscess almost is preventable using low-pressure suction drainage and that a 5% incidence of this complication is unacceptable.

References

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Dear Editor:

We appreciate the comments by Professor Irving concerning our article¹ and congratulate him for his excellent results.² In our series of 135 patients undergoing splenectomy for hematologic malignancies, a subphrenic abscess developed in 5%. Drains were placed only in those patients who had suspected or definitive pancreatic injury.

Risk factors for postoperative infectious complications include malnutrition and immunosuppression with recent chemotherapy or steroid use. In addition, we identified a significant increased risk of postoperative infections in patients who underwent splenectomy in whom the spleen weighed greater than 2000 g. The patients in our series were extremely high risk, with approximately 50% receiving chemotherapy or steroids and many with debilitating and extensive underlying diseases.

The use of drains after splenectomy remains controversial and