Editorial Commentary on “Somatostatin Infusions Reduce Post-Operative Cholorrhoea after Hepatopancreatobiliary Surgery: An Observational Preliminary Study”

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In this issue of the British Journal of Medicine and Medical Research, Pitiakoudis and colleagues publish their paper entitled “Somatostatin infusions reduce post-operative cholorrhoea after hepatopancreatobiliary surgery. An observational preliminary study” [1]. Somatostatin has numerous physiological properties, including its inhibitor effect on bile secretion. This property has been used by Pitiakoudis and colleagues to treat patients with bile leak after hepatopancreatobiliary (HPB) surgery. This interesting but preliminary study has showed promising results. However the data presented in this study cannot be used to definitely support the routine use of somatostatin in patients with bile leak after HPB surgery, because significant limitations and potential biases can be found in this study. This study consists of a very heterogeneous group of patients; furthermore, the number of patients included is very small (n=15). The patients were highly selected and there is little data to show whether adding somatostatin to traditional conservative treatment, has truly been able to speed up healing of biliary fistulae. In fact, is not clear whether the authors have used Somatostatin as an adjunct to conservative management, combined to Percutaneous drainage and eventual ERCP (Endoscopic retrograde cholangiopancreatography) +/- biliary stent or if Somatostin was the only treatment besides TPN, therefore allowing avoidance of Percutaneous drainage and/or ERCP +/- biliary stent.
The major limitation of this study is not only to have a small and limited sample size but is also being conducted in a non-randomized fashion. The true evidence supporting evidence of the use and efficacy of somatostatin in speeding up and eventually increasing the success rate of healing of biliary fistulas, can only be achieved by a randomized controlled trial where the biliary fistula cases in stable, non peritonitic and not severely septic patients, would be randomized either to traditional conservative treatment, including Percutaneous drainage and/or ERCP +/- biliary stent on one arm (Control group) and to traditional conservative treatment, including Percutaneous drainage and/or ERCP +/- biliary stent with the ADJUNCT of Somatostatin, on the other arm of the study (Study group), and see if the latest group will show a significantly higher success rate in fistula healing and/or a significantly shorter time to resolution of biliary leak.

Therefore further studies with large number of patients, especially studies in the form of randomized controlled trials are necessary to establish the true role of somatostatin in the treatment of post HPB surgery bile leak.

Bile fistula after HPB surgery occurs most commonly after laparoscopic cholecystectomy with injuries to the biliary system [2], from failure of biliary-enteric anastomosis [3] and from peripheral bile duct leakage after liver transaction [4]. The initial management of a patient with bile leak after HPB surgery is to find out its underlying cause and to control sepsis. Some causes of severe injury to the bile duct need operative repair while those with minor injury can be treated with conservative treatment and to wait for the leakage site to heal. Somatostatin is suitable for the latter group of patients only, but not for all patients with bile leak after HPB surgery. Furthermore, somatostatin should be only part of a multimodal conservative treatment which should include sepsis control with antibiotics, percutaneous drainage of intraperitoneal collections if present, eventual ERCP with endoscopic sphincterotomy and/or biliary stent placement for an effective biliary drainage, nutritional support with total parental nutrition for fasting patients, and close monitoring [5].

Last but not least the cost if Somatostatin treatment and its influence on the health care expenses, should be further investigated and a careful cost-efficacy analysis and appropriateness assessment should be performed before giving a definitive recommendation.

Complete cessation of bile leak cannot be used as an end-point to define success of conservative treatment. It has to be combined with clinical and radiological findings to define success. Complete cessation of bile leak can be a consequence of healing of the skin wound of biliary fistula with increased intraperitoneal bile collection as bile leak continues from the leakage site. Alternatively, complete cessations of bile leak can be a result of scaring at the bile duct which leads to complete obstruction of the biliary system proximal to the site of leakage. Although there is cessation in bile leak, the patient can be in serious trouble as a consequence of bile duct obstruction.

We look forward to see if these encouraging results from this preliminary study will stimulate further research on this important subject and the findings will be eventually confirmed.
REFERENCES


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