

Antegrade Versus Retrograde Cholecystectomy: What's in a Name?

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To the Editor

I have read the article entitled “Laparoscopic anterograde cholecystectomy in acute cholecystitis” with much interest [1]. The word antegrade refers to moving or extending forward as opposed to retrograde which implies moving backward or opposite to the direction of flow. These are commonly used in medical terminology as a cholangiogram done from the ampulla toward the bile duct is an endoscopic retrograde cholangiopancreatography; similarly, a retrograde pyelogram refers to intravasation of contrast from the urethra toward the kidneys. Also when referring to endovascular vessel access, an antegrade approach confers with cannulation of the vessel proximal to site of the lesion, whereas in a retrograde approach, the access vessel is distal to the target lesion.

Therefore, it appears that the terms antegrade and retrograde not only take into consideration direction of flow but also the relative anatomical position. Interestingly flow of bile is bi-directional in a reversed manner from the bile duct into the cystic duct when sphincter of Oddi is closed and in a forward direction with contraction of the gallbladder and relaxation of the sphincter of Oddi [2]. This concept of flow therefore cannot be used as a basis for determination of antegrade or retrograde cholecystectomy.

The terms antegrade and retrograde cholecystectomy have been introduced over time and with the advances in surgical practice. However, to apply these terms descriptively to the removal of the gallbladder is very enigmatic and controversial as the literature is fraught with inconsistency. I refer to Kelly et al where a retrograde cholecystectomy is considered a fundus first approach [3]. Contradictory to this, Neri et al describes a fundus first approach as antegrade [4].

Admittedly this concept was difficult to grasp; however, antegrade or retrograde is based on the surgeon's perspective

and his intended end point. The current standard for cholecystectomy is via a laparoscopic approach with initial dissection of Calot's triangle followed by fundic dissection off the liver bed. Theoretically from the laparoscopic surgeon's perspective, this is an antegrade dissection, and the same is true for an open procedure where the fundus is dissected followed by Calot's triangle. Prior to the laparoscopic era in the 1980s, this terminology was also surrounded by much controversy.

As highlighted there is confusion and the accuracy of the nomenclature comes into question. It is advised that there is standardization of the terminology. We recommend that the terms antegrade and retrograde be substituted for “Fundus First” and “Calot's First” approach for cholecystectomy.

Conflicts of Interest

The authors declare that there are no conflicts of interest related to this letter.

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