Simplified T-Tube Connector Device for Application in Low Resource Setting

Bidhayak Sarkar¹ · Utpal De¹

Received: 2 December 2020 / Accepted: 11 December 2020 / Published online: 8 January 2021
© Association of Surgeons of India 2021

Sir,

T-tube drainage of the common bile duct still remains a primordial bail out option after choledochotomy. [1] It comes in various sizes and as such does not have an external connector device unlike other drainage systems commonly used in general surgery. The sequel is a disparity in the luminal diameter of the T-tube and tube of drainage bag resulting in bile leak. This leads to soiling of the patients clothing and linen. We devised a simple and effective method to overcome this problem.

The extra corporeal end of the T-tube is connected with the hub of a syringe (2 to 5 ml). The plunger is removed from the barrel. The barrel is then connected with the funnel shaped inflow port of the commonly available urobag (Fig. 1). This prevents bile leak from the junction of T-tube and tubing of urobag, due to snugly fitted inflow port of urobag with the barrel of the syringe. Moreover, it was commensurate with Poiseuille's law of flow dynamics [2] resulting in unobstructed free flow of bile into the urobag. Finally, it is cost-effective in poor resource setting in a country like ours.

Fig. 1 T-tube, syringe, and inflow port assembly. 1—T-tube. 2—Syringe without barrel. 3—Inflow port of connector bag

References

1. Al-Qudah G, Tuma F (2020) T Tube. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing
2. Srivastava A, Sood A, Joy SP, Woodcock J (2009). Principles of physics in surgery: the laws of flow dynamics physics for surgeons - Part 1. Indian J Surg 71:182–187

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

✉ Utpal De
Mail-utpalde9@gmail.com

¹ Department of Surgery, Nil Ratan Sarkar Medical College Hospital, 138, Acharya Jagadish Chandra Bose Rd, Sealdah, Raja Bazar, Kolkata, West Bengal 700014, India