To reduce workload, improve patient comfort and reduce unplanned readmission of Patients having PTBD/PTC by Antimicrobial, Transparent & 7 Days (AT-7) approach
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Introduction
Dislodgment, twisting and infection of percutaneous trans-hepatic biliary drainage (PTBD) and percutaneous trans-hepatic cholangiography (PTC) are great challenges in care.
In usual practice, key-hole gauze is used for dressing. However, drawbacks of key-hole gauze include:
1. No antimicrobial ability
2. Only kept for 3 days
3. Difficult to observe due to the non-transparent nature
Numerous cases showed that the twisted part or the infected skin were obscured by the key-hole gauze, we believed that better monitoring could be provided if transparent and antimicrobial dressing was used. Therefore a Pilot Program called A-T-7 is introduced in the Department of Surgery since September 2017.

Objectives
1. To reduce workload
2. To prevent complication e.g. infection, dislodgment
3. To facilitate observation

Methodology
2% CHG film dressing was selected to be the dressing material due to the nature of Antimicrobial, Transparent & 7 Days Protection.
For all patients having PTC/PTBD and hospitalized in Department of Surgery since September, 2% CHG film dressing would be applied. And the dressing frequency would also be changed from 3-day basis to weekly basis. Patients were also instructed how to self-observe PTBD/PTC sites.
Time spent on dressing of two methods was collected. Average time spent on dressing was compared. Unexpected dressing change was also recorded with reasons stated.
**Result**
The frequency of dressing reduced from every 3 days to weekly, average time spent on dressing had reduced 7 minutes per case per week, these had greatly reduced workload and improved patients’ comfort.

Unexpected dressing change happened in the past when key-hole gauze was used, e.g. when inspection of pigtail site is needed; However, transparent nature of 2% CHG film dressing enhanced inspection of sites without removing dressing, thus avoided unexpected dressing change.

Moreover, there was a significant reduction of unplanned re-admission for patients with PTBD/PTC during trial period. From January 2017 to August 2017, there were 36 cases of unplanned re-admission of patients with PTBD/PTC which was either due to infection, dislodgment or twisting. There were only 5 re-admitted cases in 4 months since the introduction of 2% CHG film dressing in September.

It was worth to further evaluate the effectiveness of 2% CHG film dressing in reducing unplanned re-admission. A phase two trial of 2% CHG film dressing to outpatient setting would be implemented.