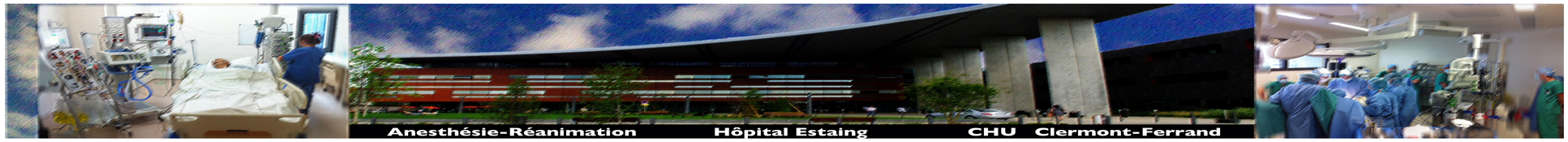

The single-use endoscope aScope™ for fibreoptical monitoring in percutaneous dilatational tracheostomy: a feasibility study

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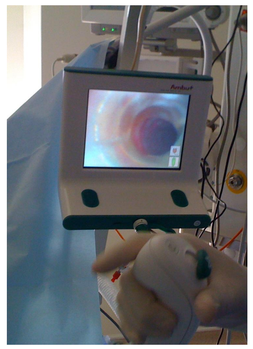
Introduction & Objectives

Use of fiberscope is recommended for the realization of percutaneous dilatational tracheostomy (PDT). In times of increasing rates of infections with multiresistant microorganisms in the intensive care unit (ICU), single-use devices play a growing role in daily clinical practice, especially regarding pitfalls in reprocessing of reusable endoscopes. A single-use fibrescope aScope™ (Ambu®) could allow to prevent cross contamination given sufficient and to diminish material costs. During the realization of PDT, the fiberscope could be injured with important costs of repair.

Background and goal of study underwent preliminary evaluation for guiding (PDT) in long-term ventilated patients in the ICU.



Matérial & Methods

This prospective study has included 10 patients requiring a bedside PDT realized under aScope™ view. Conditions of procedure (duration, visualization) were evaluated by a scale very unsatisfied/ unsatisfied/ satisfied/ very satisfied. Costs of repair were evaluated retrospectively for last 5 years.

Results

A PDT was achieved in 10 patients (median age 60 yr [49-70], IGS II 46 [39-62], duration of mechanical ventilation from last intubation 14 days [8-22]).

	Very unsatisfactory	Unsatisfactory	Satisfactory	Very satisfactory
Implementation			1	9
Interest for anatomical tracking			2	8
Guidewire entry in the trachea			2	8
Endotracheal placement of the tracheotomy tube			2	8
Brightness quality		2	2	6
picture quality	1	2	5	2
Global interest			5	5
Overall satisfaction			3	7

The presence of the screen was very popular in 100% of cases. The absence of aspiration was missed in 4 cases. In one case, the endoscope was turned off before the end of the procedure and the control of the cannula placement in the trachea had to be done with a standard endoscope. No other problems were noted.
The only cost to repair / year / fiberscope in our unit was 3000 euros, all procedures combined with 25 PDT per year. The cost of a disposable endoscope is 160 to 200 euros.

Conclusion

The single-use endoscope aScope™ appears to be a good alternative to conventional endoscopes for the realization of PDT in preventing the risk of transmitting infectious inter-patient, reducing costs (equipment, personal for decontamination) and ensuring conditions for achieving satisfactory including the presence of the didactic screen. Its present limits (duration <30 minutes, no suction) could be improved. His place in the technical arsenal should be discussed with each repair or change of fiberscope.

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