



EVALUATION OF PRACTICE EFFICIENCY WITH A NEW SHEATHED FLEXIBLE CYSTOSCOPE

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INTRODUCTION: Processing of office flexible cystoscopes is time consuming and potentially hazardous to nursing staff. In addition, there has been an increasing amount of pressure on all members of the health care delivery team to provide quality care while decreasing time allotments. Disposable, single-use endosheaths could positively affect practice efficiency without impairing patient comfort or compromising the accuracy of a cystoscopic examination. A reduction in the amount of time typically spent by a member of the health care team devoted to instrument reprocessing could be devoted to other duties such as direct patient care, and more cystoscopies could be performed on a daily basis without increasing the number of cystoscopes in a given practice. We compared a new disposable flexible cystoscope sheath system with a standard flexible cystoscope for performance, comfort, and cleaning/preparation time in a randomized, single-blind trial.

METHODS:

Fifty patients undergoing office flexible cystoscopy were randomized into control or sheath groups. The control group employed a 16F office flexible cystoscope manually cleaned, then disinfected with Cidex after each use. The sheath group used the CST-2000 with Slide-On™ Endosheath System® (Vision Sciences, Natick, MA). The latter has an oval cross-section of 13.8F x 16.8F. Each sheath costs \$25. A questionnaire evaluating the procedure was filled out by the physician, patient, and nursing staff.

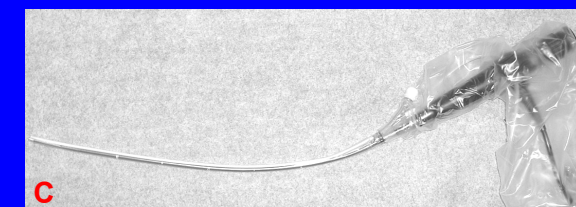
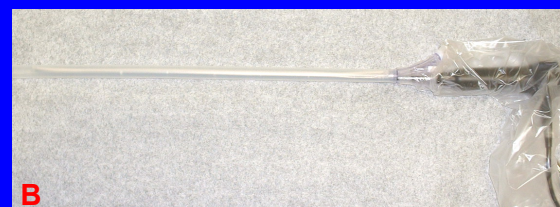
RESULTS:

	Standard Cystoscopy	Sheath Cystoscopy			Statistical test	p-value
Demographic data						
Number of patients (n)	23	27			-	-
Age (years, mean±SD)	59.3±18.9	58.8±16.6			t-test	0.916
Gender (number male/female)	11/12	17/10			chi-square	0.28
Times (min, mean±SD)						
Total cleaning/setup time (min.)	42.6±3.4	11.7±4.4			t-test	<0.00001
Procedure time (min.)	3.7±2.5	4.2±2.6			t-test	0.54
Rating by physician (mean±SD)			Worst	Best		
Ease of insertion	9.1±0.7	7.3±2.0	1	10	t-test	0.00018
Optical Quality	8.4±1.5	8.1±1.8	1	10	t-test	0.55
Cystoscope handling	8.6±1.3	8.0±1.8	1	10	t-test	0.2
Irrigation setup and use	8.6±1.8	8.0±1.9	1	10	t-test	0.33
Passage of instruments*	9.1±0.35	9.0±0.58	1	10	t-test	0.59
Patient comfort	7.7±1.9	7.9±1.6	1	10	t-test	0.68
Rating by assistant (mean±SD)						
Patient comfort	8.7±1.7	7.6±1.8	1	10	t-test	0.051
Rating by patient (mean±SD)						
Discomfort during procedure	2.6±2.2	3.1±2.0	10	1	t-test	0.41
Discomfort after procedure	2.4±1.9	2.8±2.1	10	1	t-test	0.52

*Instrument passage evaluated for stent removal only (8 patients in control group and 13 patients in sheath group)

CST-2000 with disposable Slide-On™ Endosheath System®:

- A. System Components
- B. Cystoscope with protective covering over shaft
- C. Cystoscope ready for use



CONCLUSION:

- The Endosheath System® flexible cystoscope provided equivalent image quality and handling compared to a standard flexible cystoscope.
- Although this cystoscope was subjectively more difficult to insert into the urethra—possibly due to its larger French size and unfamiliar oval contour—there was no difference in patient comfort as assessed by physicians and patients alike.
- Use of the Endosheath System saved an average of 31 minutes of preparation time