

Computer-Assisted Instruction (CAI) on Drug Use in Hemodialysis Patients with Bone Metabolism and Hypertension

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Background

- Patient education is a combination of learning experiences¹
 - Behavior changes, producing changes in knowledge, attitudes and skills needed to maintain and improve health
- Although patients want more information, they ask fewer questions in the consultation room²
- Computerized educational systems seem as an ideal opportunity for efficient patient education¹
- There are few CAI softwares for patients with chronic kidney disease.

¹ Patient Education and Counseling 2007; 66: 21-8.

² Health Psychology Oxford: BPS Blackwell; 2004.

Objective

“To evaluate the impact of a newly developed CAI on hemodialysis patients in terms of their knowledge and attitudes towards the program”

Method

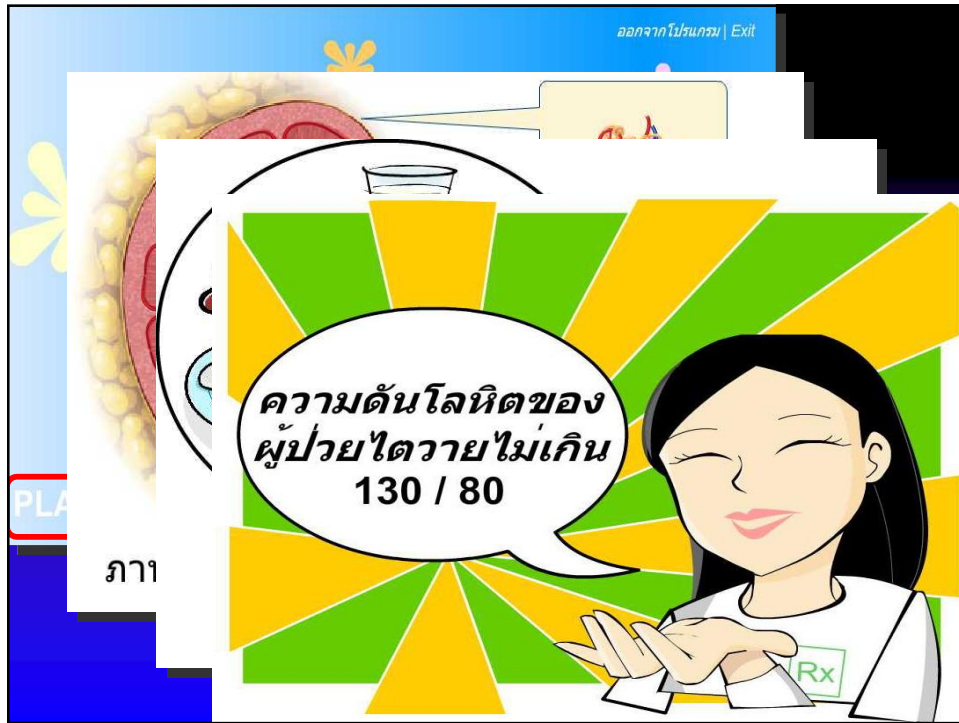
- Developed Computer-assisted instruction
 - Using **Adobe Flash CS3 Professional**
 - **Part 1** is an animated tutorial that lasts for 10 minutes
 - **Part 2** is a 4-minute case scenario
- 28 hemodialysis patients at the Hemodialysis Unit of the Songklanakarind Hospital

Method

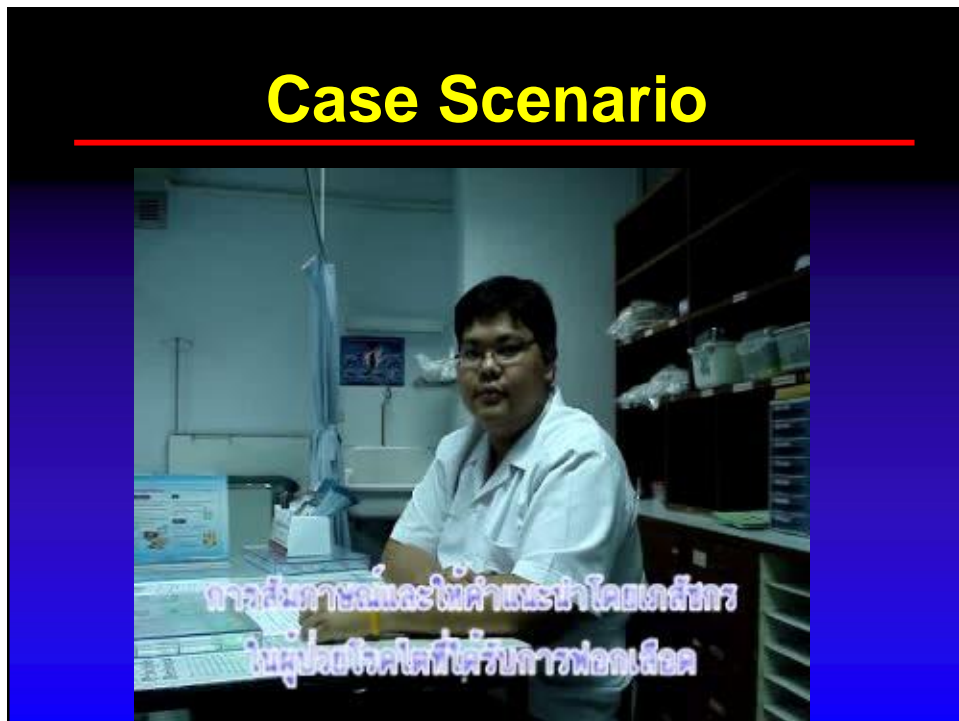
- 10 multiple choice questions and 10-item attitude test
 - Before and after the CAI implementation
- Outcomes were knowledge and satisfaction scores
- Method used to compare the outcome was paired t-test

Baseline Characteristics

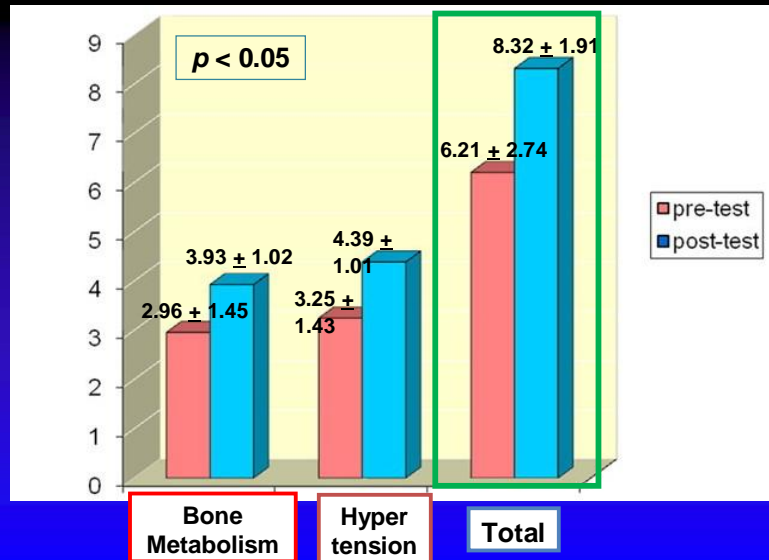
Variables	N (%)
Female sex	15 (53.6)
Duration of undergoing hemodialysis	
< 3 years	3 (10.7)
≥ 3 years	25 (89.3)
Disease and medication use knowledge (estimated by patients)	
5	6 (21.4)
4	13 (46.4)
3	7 (25)
2	0 (0)
1	2 (7.1)
History of using CAI	3 (10.7)



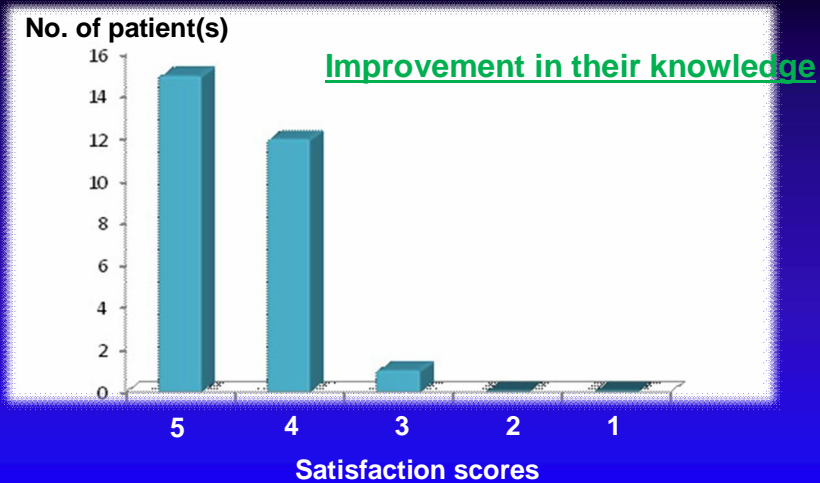
Case Scenario



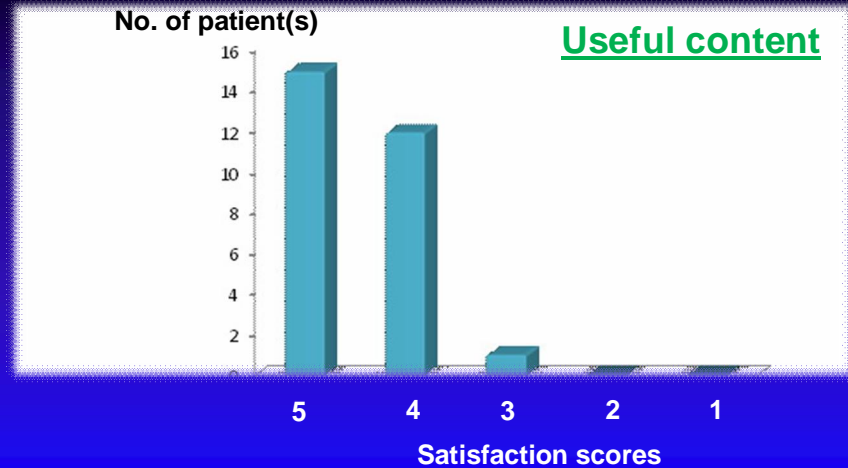
Results: Knowledge scores



Results: Satisfaction scores



Results: Satisfaction scores



Conclusion

- Newly developed CAI could improve the knowledge of hemodialysis patients
- It was acceptable by all patients
- Limitations
 - No comparison with standard treatment group
 - Small sample size
 - Long-term outcomes e.g. phosphorus level, home blood pressure monitoring and cardiovascular disease

Conclusion

- Computer-assisted instruction would be a **useful and effective tool** for educating relevant diseases and medication use in patients undergoing hemodialysis

Question?



Thank you