

Remote Monitoring of Videourodynamics Using Smart Phone and Free Instant Messaging Software

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Introduction

- Urodynamics play an important role in assessing the function or dysfunction of the lower urinary tract
- According to the ICS recommendation, clinical assessments including a detailed history, physical examination, frequency/volume chart, and uroflowmetry with determination of post-void residual volume should be first obtained to formulate the urodynamic question

- If the urodynamics were performed by the attending physician, the results would be more reliable
- However, attending physicians are often occupied by various clinical or research jobs, so that it's difficult for them to be present at the scene of every urodynamic test

- **Smart phones, such as iPhone, Blackberry, and Google's Android are increasing in popularity, and some studies have highlighted the use of smart phones to support telemedicine and telecare**
- **The aim of this study was to evaluate the feasibility of using smart phones plus free instant messaging software for remote monitoring of videourodynamics.**

Materials and Methods

- From November 2011 to October 2012, 85 females with voiding disorders were enrolled for videourodynamic tests
- These patients were assigned to
 - Group 1: videourodynamics remotely monitored by the attending physician by using iPhone/iPad and Skype
 - Group 2: videourodynamics with the attending physician present

- In group 1, a senior resident and a technician first set up the urodynamic catheters, then the resident made a video communication with the attending physician at a distance by iPhone
 - On the iPad, the physician could continuously assess the qualitative and quantitative plausibility of all tracing signals
- In group 2, the attending physician was in the laboratory of videourodynamics to directly monitor the procedure