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Introduction & Objectives:

Forgotten ureteral stents (FUS) is a great threat to both patients and doctors. Applications on smartphones can significantly reduce the incidence of FUS. But existing applications do not have instant notification and consultation functions. To implement those function, we developed a ureteral stent tracking system embedded in a social networking service application, WeChat.

Materials & Methods:

"Ureteral Stent Tracking System" was developed on WeChat, a social media application using by 1.4 million active users. The study consecutively enrolled patients who underwent ureteral stent installation from April 2018 to July 2018. Each patient's information was recorded on the smartphone by the urologists to create a document immediately after the surgery. The system sends notifications twice a week to both patients and clinicians via the message function of WeChat.

Results:

A total of 183 patients were enrolled. The most senior patient enrolled was 73 years old. 156 (85.2%) patients underwent stent extraction before the scheduled time. 22 didn't underwent stent extraction before the scheduled time because of urinary tract infection or stone residue. They underwent stent extraction within 1 month after the scheduled time. 2 patients didn't come to the hospital until we had made a phone call to them, though they had received notification from the online system. During the study, no patient was lost-to-follow up. In bilateral stents cases, no stent was forgotten after extraction surgery. A total of 85 (46.4%) patients consulted 132 issues in the system. 52 (39.4%) patients complained about hematuria. 36 (27.3%) patients reported lower urinary tract symptoms. All the consultations were answered within 24 hours.

Conclusions:

"Ureteral Stent Tracking System" implement instant notification and consultation functions via WeChat. It helps urologists to manage indwelling ureteral stents and to reduce the incidence of FUS efficiently.