

# Unsuccessful Endoscopic Treatment Of Vesicoureteral Reflux With Deflux - Two Case Studies

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## Abstract

The endoscopic treatment of vesicoureteral reflux is known as a successful method of RVU in children. The aim of this study is to present two cases where the endoscopic treatment was not successful despite administration of injection three respectively two times. These two cases needed to undergo an open surgery intervention in order to treat the RVU.

## INTRODUCTION

The Vesicoureteral Reflux (RVU) is a more common uropathy among pediatric ages (1 -2 %) and 30 – 40 % among children that suffer from frequent urinary infections (1). The endoscopic treatment (TE) of RVU through subureteral injecting, was for the first time described by Matouschek in 1981 and applied by Puri and O'Donnel in 1982 (2). The RVU endoscopic treatment is now considered to be a modern and valuable method that avoids open surgery and long profilaxis with antibiotics (3).

## MATERIALS AND METHODS

### Case 1

In 2010, a four year girl suffering from repetitive urinary tract infections was diagnosed with RVU in both sides. The diagnosis was verified by voiding cystourethrography and was in stage III. In the same year, the child underwent an endoscopic treatment with Deflux. Two months after the endoscopic treatment, the Voiding cystourethrography was checked and it was found that RVU in both sides persisted and urinary infections continued. After 8 months the concerned patient was subject to endoscopic treatment for the second time and it was not successful. In January 2012, the endoscopic treatment with Deflux was carried out for the third time and stage III RVU and urinary infections persisted. In November 2012, open surgery treatment was conducted where re-implantation of two ureters according to Cohen was carried out (image 1). Five months after re-implantation, the checking of Voiding cystourethrography was conducted and the RVU was cured, there were no urinary infections and no need for pharmacological

treatment. During the open surgery treatment (re-implanting), release of ureters was difficult because of the injection of Deflux three times before, which caused inflammatory processes around ostiums of ureters

### Case 2

A six year old girl was diagnosed with bilateral RVU. She was twice treated in an endoscopic manner with Deflux (image 2), but without any success because the bilateral RVU persisted. This patient also underwent open surgery treatment (re-implanting). During bilateral re-implanting, inflammatory infiltrates were found around ostiums. A visible granuloma was found in the left ostium. Prior to re-implanting, it was necessary to resect two ureters 1.5cm due to changes caused by previous injection of Deflux. This patient was also subject to re-implanting according to Cohen. There were no complications postoperatively. Urinary infections stopped and bilateral RVU was eliminated. This was verified by clinical situation and while checking voiding cystourethrography that was conducted four months after re-implanting ureters. The scintigraphy of kidneys carried out 8 months later showed normal functioning of kidneys.

## DISCUSSION

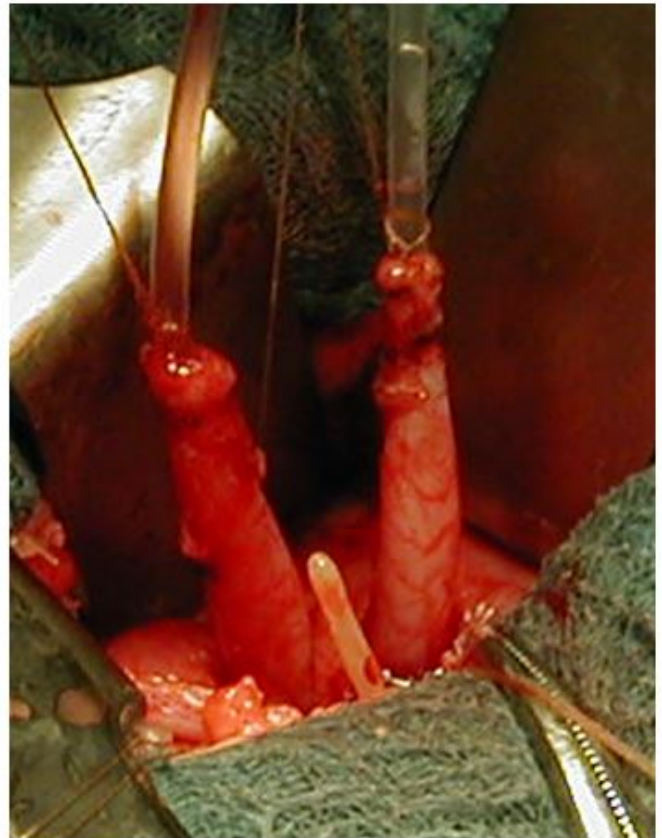
Endoscopic treatment started being used for the first time by Puri and O'Donnel (1982). Capozza and Caione, suggested that endoscopic treatment should be the first alternative in relation to most RVU cases, a useful alternative that replaces open surgery and longer profilaxis with antibiotics (4). The endoscopic treatment of RVU became widely accepted as a standard operation for many specialists of pediatric urology

(5). In endoscopic treatment of RVU, the volume of injected Deflux is also important. In our two cases presented in this study, the volume of injected Deflux was 0,4-0,7 ml and resulted being unsuccessful. In other studies, the quantity of the volume of Deflux used was smaller (0,1-0,4 ml), therefore the level of success was lower.(5). In the study of Kempf (6) and Zyczkowski (7) complications were reported following the endoscopic treatment of RVU of three children from 5 months to 7 years old. The complications were identical to our complications that were solved with open surgery (re-implanting of ureters).

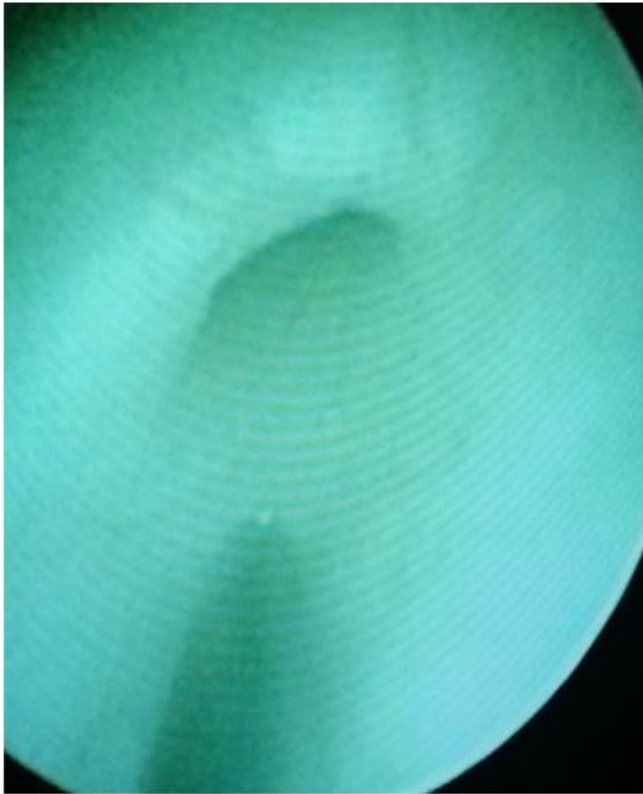
### **CONCLUSIONS**

The RVU treatment with open surgery (re-implanting) following an unsuccessful endoscopic treatment is possible and rather successful. During the RVU treatment after endoscopic treatment, it is necessary to remove granulomas or pseudocysts that are formed around ostiums due to previous injecting of Deflux. The use of Deflux, as synthetic material, may cause serious complications. As described in abovementioned examples, endoscopic treatment does not always cure RVU, on the contrary it adds to RVU problems. The quantity of the volume of Deflux injected is very important for the cure of RVU in endoscopic manner.

### **Open Surgery**



### Endoscopic surgery



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