Laparoscopic management for complicated urachal remnants in our hospital

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Introduction:

The traditional surgical approach for removing a urachal remnant is via a large transverse or midline infraumbilical incision. In recent years, laparoscopic surgery (LS) has been performed by many surgeons and urologists to treat urachal remnants. In February 2020, we started LS for urachal remnants in our hospital. This study aimed to review our experience in LS for urachal remnants and report the efficacy and outcomes of this procedure.

Methods and procedures:

Five cases of LS for urachal remnants were performed from February 2020 to December 2021. The patients' medical records were retrospectively reviewed.

Surgery: (Fig. 1)

At our hospital, we performed a 3-port multiport method on the right side of the abdomen (Fig 2) . Saline was injected into the bladder, the top of the bladder was confirmed, and the urachal remnant was removed together with the left and right lateral umbilical ligament. The bladder was not opened, and the umbilicus was preserved. No peritoneal suture was performed. The resected specimen (Fig 3) was sent for histopathological examination.

Results:

Patient demographic and perioperative data are shown in Table 1. There were four men and one woman with a mean age of 29 years (range, 23 to 35 years). All patients underwent incision, drainage, and administration of antibiotics before surgery. The average waiting time for surgery was 4.2 months (range, 3 to 5 months). The average operation time was 99.8 minutes (range, 91 to 117 years)., and the amount of blood loss was small in all cases. The average postoperative hospital stay was 1.8 days (range, 1 to 3 days), and there were no postoperative complications. Postoperative pathological examination revealed epithelium in one case, but no malignant findings were found in all cases. There was no recurrence of umbilical discharge.

Conclusion:

Five cases of LS for urachal remnants performed at our hospital were reported. It was safely introduced without serious postoperative complications.

FIGURE 1. The surgical procedures for laparoscopic urachal remnants excision.(case 3)

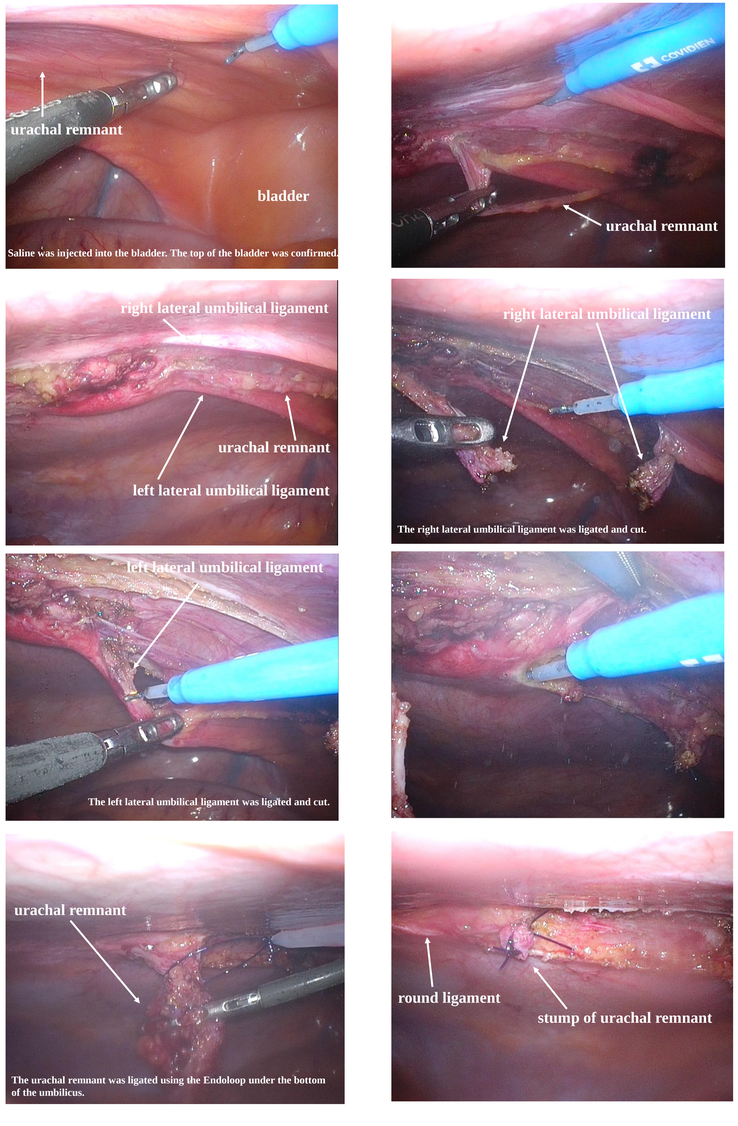
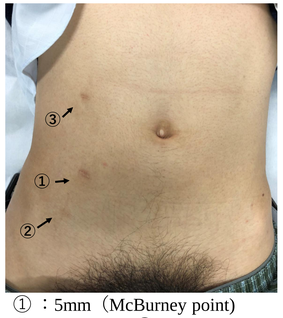


FIGURE 2. Postoperative port site scar



①：5mm（McBurney point)
②：5mm　③：5mm

FIGURE 3. Resected specimen

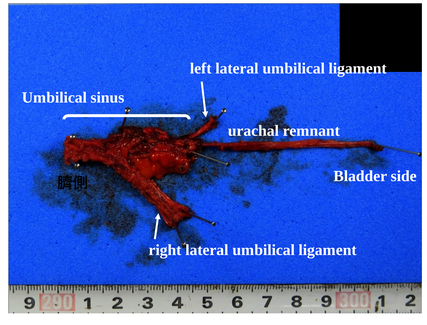


TABLE 1. Patient characteristics and perioperative data

	Case1	Case2	Case3	Case4	Case5	Average
Age(yr)	28	35	29	30	23	29
Sex	M	M	M	M	F	4：1
Height(cm)	170	176	184	166	161	171
BW(kg)	55	70	76	63	52	63.2
BMI	19	22.6	22.4	22.9	20.1	21.4
C.C	redness	pain	pus	pain	pain	
Drainage	+	+	+	+	+	
Interval time(mo)	5	4	3	4	5	4.2
OT(min)	117	97	101	93	91	99.8
Bladder	preserve	preserve	preserve	preserve	preserve	
Umbilicus	excision	preserve	preserve	preserve	preserve	
BL(ml)	0	0	0	0	0	0
POS(day)	1	1	1	3	3	1.8
Complication	-	-	-	-	-	
Pathological findings					epithelium	
Recurrence	-	-	-	-	-	