



ORIGINAL ARTICLE

Laparoscopic management of symptomatic urachal remnants in adulthood



Sze Li Siow*, Hans Alexander Mahendran, Mark Hardin

Department of Surgery, Sarawak General Hospital, Kuching, Malaysia

Received 7 January 2014; received in revised form 18 February 2014; accepted 24 April 2014
Available online 16 June 2014

KEYWORDS

bladder;
laparoscopy;
urachal cyst;
urachus;
urachal remnant;
urachal sinus

Summary *Background:* The traditional surgical approach to the excision of persistent urachal remnants is a lower midline laparotomy or semicircular infraumbilical incision. The aim of this study is to report our experience with laparoscopic urachus excision as a minimally invasive diagnostic and surgical technique.

Methods: This study was a prospective study involving patients who were diagnosed with persistent urachus and underwent laparoscopic excision. The morbidity, recovery, and outcomes of surgery were reviewed.

Results: Fourteen patients (8 men) with a mean age of 22.8 ± 6.42 years underwent laparoscopic excision. All patients presented with discharge from the umbilicus. Although four patients had no sonographic evidence of a patent urachus, a diagnostic laparoscopy detected a patent urachus that was excised laparoscopically. One patient required laparoscopic reoperation for persistent discharge, and one patient presented with bladder injury, which was repaired via a small Pfannenstiel incision without any morbidity. The mean operative time was 71.1 ± 0.28 minutes, and the mean duration of hospital stay was 1.3 ± 1.38 days. Pathological examination confirmed a benign urachal remnant in all cases.

Conclusion: Laparoscopy is a useful alternative for the management of persistent or infected urachus, especially when its presence is clinically suspected despite the lack of sonographic evidence. The procedure is associated with low morbidity, although a small risk of bladder injury exists, particularly in cases of severe active inflammation. Recurrence is uncommon and was caused by inadequate excision of inflammatory tissue in our series that was easily managed laparoscopically.

Copyright © 2014, Asian Surgical Association. Published by Elsevier Taiwan LLC. All rights reserved.

Conflicts of interest: The authors have no conflicts of interest or financial ties to declare.

* Corresponding author. Department of Surgery, Jalan Hospital, 93586 Kuching, Malaysia.

E-mail address: szeli18@yahoo.com (S.L. Siow).

<http://dx.doi.org/10.1016/j.asjsur.2014.04.009>

1015-9584/Copyright © 2014, Asian Surgical Association. Published by Elsevier Taiwan LLC. All rights reserved.

1. Introduction

Urachal remnants represent a failure in the obliteration of the allantois at birth that connects the bladder to the umbilicus.¹ It is a rare congenital anomaly, occurring in 1.6% of children under 15 years of age and in 0.063% of adults.² The persistence of the urachal lumen after birth manifests in a variety of clinical presentations, of which recurrent periumbilical discharge is the most common.³ There are four variants of urachal anomalies: urachal cysts, sinus, diverticulum, and a patent urachus. Management of urachal remnants requires wide local excision of the urachus and inflamed adjacent extraperitoneal tissue, which is traditionally performed via a lower midline laparotomy incision. Although effective, it shares the same associated morbidities of any laparotomy incision with inherent postoperative pain, risk of wound infection, bleeding, and slow return to normal activities. Since its first description in 1993,⁴ laparoscopic surgery has been considered as an alternative to conventional open resection of urachal remnants. The laparoscopic approach has the benefits of being able to confirm the presence of urachal remnants and enable magnified dissection along the extraperitoneal plane until the dome of the bladder in the space of Retzius with minimal postoperative pain and rapid recovery to normal activities. The benefit of superior cosmesis compared to a lower midline incision is an added bonus. Studies reporting on the laparoscopic management of urachal remnants and outcomes are scarce. There are only a few isolated case reports or small case series owing to the rarity of this pathology. In this retrospective review, we present our center's experience with the laparoscopic management of symptomatic urachal remnants and our short-term outcomes.

2. Materials and methods

Between February 2010 and June 2013, 14 consecutive patients who were diagnosed with symptomatic urachal remnants underwent laparoscopic excision under the Department of Surgery, Sarawak General Hospital, Kuching, Malaysia. Patient demographics, ultrasonographic findings, operative procedure and findings, complications, post-operative outcomes, histopathological findings, and follow-up details were documented and stored in a prospectively maintained database. All patients presenting with recurrent umbilical discharge were enrolled and underwent sonographic assessment to confirm the diagnosis of persistent urachal remnants prior to being counseled for diagnostic laparoscopy with the intention of laparoscopic excision of urachal remnants if present. Patients who had overt infection and presented with umbilical abscesses were treated with drainage of abscesses via a small infraumbilical incision and prescribed with parenteral antibiotics until clinically there was regression of the surrounding cellulitis and periumbilical discharge. These patients were then discharged with oral antibiotics to complete a 10-day course of Amoxicillin and Sulbactam with an elective date for laparoscopic excision within 6 weeks. This study was approved by the hospital's ethics

committee, and the permission to publish this paper was obtained from the Director General of Health, Malaysia.

2.1. Surgical technique

Laparoscopic excision was performed by one of three laparoscopically proficient surgeons at this tertiary-care hospital. All patients were administered a single dose of parenteral Amoxicillin/Sulbactam during induction of anesthesia. Foley's catheterization of the urinary bladder was routinely performed to initially decompress the bladder during the initial dissection of the urachal remnants and later enable retrograde distension of the bladder prior to ligating the insertion of the urachus at the dome of the bladder. The patient is placed in the supine position, with both arms secured at the sides of the body. The surgeon and the camera surgeon stand on the right side of the patient with the monitor on the opposite side of the patient. The first trocar (12 mm, Endopath Xcel; Ethicon Endo-Surgery, Ohio, USA) is inserted at the level of the umbilicus just medial to the anterior axillary line via direct visualization through the trocar. Once the port is placed inside the peritoneal cavity, a CO₂ pneumoperitoneum is created with a pressure of 12 mmHg. A 10-mm, 30° angled lens camera is typically used. Under direct vision, 5-mm trocars are placed similarly medial to the anterior axillary line at the level of the right anterior iliac spine and two fingerbreadths inferior to the costal margin with care taken to ensure adequate spacing between all three ports (ideally, a hand's breadth) to avoid crowding of instruments and enable triangulation (Fig. 1).

Wide local excision is performed using a traumatic ratcheted grasper to hold the urachal remnants, and dissection is accomplished using a combination of hook and scissors with electrocautery. The urachal remnants and adjacent tissues should be dissected off the transversalis fascia cranially until the umbilicus and caudally until the space of Retzius, where the urachal remnants insert into the dome of the bladder (Fig. 2). The urachus is usually easily identified midway between the umbilicus and the urinary bladder in the midline. The urachus is clipped with 5-mm hem-o-lock clips (Weck; Teleflex Medical, Co Westmeath, Ireland) and transected near the umbilicus. The bladder is distended to facilitate identification of the insertion of the urachal remnants into the bladder, which is ligated with a loop of chromic catgut and cut near the dome of the bladder.

3. Results

The patient demographics are summarized in Table 1, whereas surgical outcomes are shown in Table 2. There were eight men (57.1%) and six women (42.9%) with a mean age of 22.8 ± 6.42 years. The most common presentation was umbilical discharge seen in 11 patients (78.6%), and the remaining three patients presented with an umbilical abscess (21.4%).

Although abdominal ultrasonography was performed for all patients, only 10 patients (71.4%) had sonographic evidence of patent urachal remnants. Intraoperatively, 11 patients (78.6%) were found to have urachal sinus and three

Download English Version:

<https://daneshyari.com/en/article/4282726>

Download Persian Version:

<https://daneshyari.com/article/4282726>

[Daneshyari.com](https://daneshyari.com)