Case Report

Successful Laparoscopic Resection of a Sacrococcygeal Teratoma in an Adult: Report of a Case

ATSUKO TSUTSUI1, TAKATOSHI NAKAMURA1, HIROYUKI MITOMI2, WATARU ONOZATO1, TAKEO SATO1, HEITA OZAWA1, MASANORI NAITO1, ATSUSHI IKEDA1, ATSUSHI IHARA1, and MASAHIKO WATANABE1

1 Department of Surgery, Kitasato University Hospital, 1-15-1 Kitasato, Sagamihara, Kanagawa 228-8555, Japan
2 Department of Human Pathology, Juntendo University School of Medicine, Tokyo, Japan

Abstract

Sacrococcygeal teratoma is a relatively rare congenital retroperitoneal tumor in adults. The standard treatment is a complete tumor resection. This report describes the successful laparoscopic resection of a sacrococcygeal teratoma. The patient was a 27-year-old woman with a well-demarcated cystic mass, 6 cm in diameter, in the retroperitoneum overlying the anterior surface of the sacrum. The mass was resected laparoscopically. A histopathological examination showed a mature teratoma. The magnifying function of the laparoscope allowed an en bloc resection in the narrow pelvic cavity, without damaging the tumor. The aesthetic outcome was excellent. The patient remains relapse-free at 1 year 6 months after surgery.

Key words Teratoma · Laparoscopic surgery

Introduction

Sacrococcygeal teratoma is a congenital tumor that usually arises in the intrapelvic space or sacrococcygeal region in adults. Teratomas confined to the anterior surface of the sacrum are associated with an age-related increase in the risk of malignancy.1 No study has so far reported a successful outcome of laparoscopic surgery for sacrococcygeal teratoma in adults. This report describes a case of sacrococcygeal teratoma that was successfully treated by a laparoscopic resection.

Case Report

A 27-year-old woman presented with an intrapelvic mass. The abdomen was initially flat, with no palpable masses or tenderness. Blood tests showed no abnormalities. Abdominal ultrasonography revealed a well-demarcated cystic mass, 6 cm in diameter, in the pelvic cavity. Abdominal computed tomography showed a well-demarcated, low-density mass on the anterior surface of the sacrum. Abdominal magnetic resonance imaging demonstrated a mass with high signal intensity on T1-weighted images and a mixture of high and low signal intensity on T2-weighted images, with no invasion of the sacrum (Fig. 1). A retroperitoneal sacral tumor was diagnosed, and laparoscopic surgery was performed with the patient under general anesthesia. A small median incision (3 cm) was made in the hypogastric region, and a camera port was placed in the suprambilical region. An examination of the intrapelvic region showed a mass on the anterior aspect of the sacrum, with no invasion of the ureter or the hypogastric plexus overlying the sacrum. The laparoscope provided a good view of the pelvic cavity, allowing for the mass to be safely resected with the use of an Endo-Catch Gold device (Covidien Autosuture, Mansfield, MA, USA), without damaging the cystic wall or coming into contact with the surrounding tissue. The mass was resected after extending the small incision in the lower abdomen by 2 cm (Fig. 2). The resected mass had a smooth surface and was elastic and soft. The contents of the cyst were mud-like, with no parenchymal components. The histopathological examination showed the cyst wall to be lined by mature ciliated columnar epithelium. Stratified squamous epithelium with bronchial glands, transitional epithelium, and columnar (glandular) epithelium with mucus were also noted (Fig. 3). However, there was no evidence of undifferentiated components or malignant cells, thus suggesting a mature teratoma. The patient recovered uneventfully after surgery and was discharged.

Reprint requests to: M. Watanabe
Received: September 1, 2009 / Accepted: January 6, 2010
Fig. 1. A T1-weighted horizontal cross-sectional images, showing a mass of high signal intensity, 6 cm in diameter, on the anterior surface of the first sacral vertebra (S1) (arrows). B T2-weighted sagittal images, showing a mass with a low and high signal intensity (arrows).

Fig. 2. A Intrapelvic laparoscopy, showing a retroperitoneal mass on the anterior surface of the sacrum (arrow). B The tumor (solid arrow) was confirmed not to invade the ureter (dashed arrow) or the hypogastric plexus.

Fig. 3. A Ciliated columnar epithelium lined the wall of the cyst (H&E stain, ×90). B The transitional epithelium was seen in some regions (H&E stain, ×75). C The columnar epithelium with mucus (H&E stain, ×52).