International Journal of Clinical Obstetrics and Gynaecology

ISSN (P): 2522-6614
ISSN (E): 2522-6622

www.gynaecologyjournal.com
2019; 3(1): 04-06
Received: 13-11-2018
Accepted: 15-12-2018

Dr. Yoga Lakshmi
Fellow in Minimally Invasive Surgery in Radhakrishna Multispeciality Hospital and IVF Centre, Karnataka, India

Dr. Vidya V Bhat
Director in RKMH, Consultant in OBG, Laparoscopist, Sonologist and IVF Specialist, Radhakrishna Multispeciality Hospital and IVF Centre, Karnataka, India

Correspondence
Dr. Yoga Lakshmi SK
Yoga Lakshmi
Fellow in Minimally Invasive Surgery in Radhakrishna Multispeciality Hospital and IVF Centre, Karnataka, India

Laparoscopic management of ovarian dermoid cysts in young and adolescents women

Dr. Yoga Lakshmi SK and Dr. Vidya V Bhat

DOI: https://doi.org/10.33545/gynae.2019.v3.i1a.02

Abstract
Objective: To evaluate the safety and potential advantages of laparoscopic approach for management of ovarian dermoid cysts.
Design: Retrospective study.
Methods: From October 2013 to October 2018, 14 patients underwent laparoscopic removal of dermoid cysts in young and adolescent women.
Results: Total of 14 cases operated laparoscopically for the removal of dermoid cyst. Largest one was 15X10cm in which spillage was expected.3 cases were bilateral others were unilateral. Two cysts were removed through enucleation. 11 cases were managed by removal of cysts via Endobag. One case of Dermoid cyst which was 15X10cm Enbag drainage and removal of cysts was done. Spillage was there in 4 cases including the larger cyst. None of the case had chemical peritoneal peritonitis.
Conclusion: Laparoscopic approach allows proper exposure of Cul de sac and allows forceful jet lavage aspiration ensuring pelvic clean out from any microscopic material of the dermoid cyst. A situation may not be available during open laparotomy.

Keywords: Dermoid cyst, Laparoscopic dermoid cystectomy, dermoid in adolescent.

Introduction
Benign cystic teratoma, or as commonly addressed dermoid cysts, are basically germ cell tumors of the ovary. Mature cystic teratomas (MCTs) are the most common ovarian neoplastic lesions found in adolescents[1]. MCTs are usually asymptomatic and are often discovered incidentally on examination or imaging. MCTs account for approximately 70% of benign ovarian tumors in women under 30 years of age and 50% of paediatric tumours [2-4]. MCTs are bilateral in approximately 10–20% of cases [5, 6].
Most of dermoid cysts occur without significant clinical symptoms and they are often discovered incidentally during pelvic examination or routine ultrasound.

Materials and Methods
Our study included fourteen patients with diagnosis of unilateral or bilateral dermoid cysts.14 Cases were operative laparoscopically during the period from October 2013 to October 2018.All patients did preoperative evaluation including transvaginal sonography and Doppler studies to confirm nature of cysts. Conclusive confirmation for the cysts was confirmed by the pathological examination of the specimens which was removed in all cases.
Patients detail history was taken including chief complaints, past history, obstetric history, all investigations with TVS was done, operative procedure either cystectomy/salphingo-oophorectomy was explained, postoperative complications and Histopathology report were obtained.
Informed consent from the patient obtained for Laparoscopic management. GA preferred for all the cases. We used a supraumbilical 12 mm trocar for the telescope and three 5 mm trocars for secondary punctures and operative instrumentation. Pneumoperitoneum was achieved.
In cases designed for ovarian cystectomy, a uterine elevator or a suture is placed in the fundus to retract anteriorly. The margins of the ovarian capsule are held with Allis clamps. A grasper forceps was used to apply traction on ovarian ligament and steady the ovary. Combined uterine manipulation plus grasping ovarian ligament allows keeping the ovarian cyst steady during steps of cystectomy. Vasopressin was given which in turn helps as hydro dissection. The cleavage plane was created by holding cyst edge with bowel holding and separate cyst wall with Maryland's forceps. Careful dissection is done near the base of the ovary. The haemostatic running suture is placed at the base to achieve haemostasis.

During salphingo oophorectomy, the infundibulopelvic ligament is triple-clamped and incised between the first and second clamps. The distal portion of the round ligament is reapproximated to the cornu of the uterus. The proximal stump of the round ligament is buried within the broad ligament. The defect in the broad ligament and the peritoneal lining of the mesosalpinx are re-established with a running suture.

In case spillage occurs, suction irrigation done using warm ringer's solution, continuous jet wash irrigation with prompt suction throughout surgery, taking care to avoid any spread of fluid to upper abdomen. Jet irrigation dislodge and clear any debris from surface of peritoneum and push them towards cul de sac. This kept the pelvis crystal clear and no microscopic residue from cyst material or contents were left in the pelvis We use two wide bore suction irrigation cannulae simultaneously from both secondary puncture sites.

Additionally, copious fluid dilutes the irritant effect of dermoid cyst contents. No conversion to Laparotomy occurred in any of the operations.

Results

Among 14 cases of dermoid cyst, 3 cases were bilateral dermoid cyst and 11 cases were unilateral. Majority of the patients presented with chronic abdominal pain (Table 1). Mean age was 14.5 yrs. No other associated condition associated. One of them presented with mass per abdomen, that was huge mass of 24weeks size cyst. That huge cyst was a case of infertility came to us at the age of 19yrs.This cyst was removed through Enbag drainage (Table 2) and cyst removal, salphingo oophorectomy was done on that side. Contralateral ovary and tube normal. spillage ++ thorough suction and irrigation done. Much of time consumed in thorough suction and irrigation.3 cases of bilateral dermoid cyst, cystectomy done laparoscopically. Totally (7 cases) 50% had spillage in which thorough suction and irrigation was done. None of the cases had chemical peritonitis.2 cases were enucleated and removed in endobag.

In patients with bilateral dermoid cyst, bilateral cystectomy with ovarian reconstruction was done. One of the important factor to be kept in mind is about their future fertility i.e, ovarian reserve whether it has adverse effect on the AMH or not.

Table 1: Symptoms with which the patient presented

Symptoms	No of patients
Chronic pelvic pain	7
Mass per abdomen	1
Asymptomatic	4
Infertility	1
Irregular cycle	1

Table 2: Removal of dermoid

Mode of Removal	No of patients
Endobag	13
Enbag	1

Table 3: Procedure

Procedure	No of patients
Cystectomy	13
Salphingo oophorectomy	1

Discussion

Mature cystic teratomas in the adolescent population poses a major challenge because it has potential impact over the future fertility. A Balance should be maintained between complete excision and aggressive intervention because it will be having an impact on childbearing potential.

Laparoscopic approach was preferable to open surgery in protecting ovarian function. Surgical intervention should be pursued if the patient becomes symptomatic or considered if the individual lesions grow to a diameter of greater than 5 cm. Surgeons should protect ovarian function carefully by retaining as much ovarian tissue as possible. Thermal and mechanical injury to the ovary should be avoided. Thermal and mechanical injury to the ovary should be avoided. Potential deleterious mechanisms are the accidental removal of any ovarian tissue during cystectomy, damage inflicted on the ovarian stroma, and vascularization by surgery-related local inflammation and electrosurgical coagulation during haemostasis.

Regarding the ovarian reserve, few studies have specifically investigated residual ovarian function after laparoscopic excision of dermoid cysts, especially in association with infertility [12]. Kim *et al* reported no difference in the serum levels of anti-Müllerian hormone (AMH) between women with mature cystic teratomas and age-matched and body mass index (BMI)-matched controls [12]. They speculated that mature cystic teratomas do not significantly affect ovarian reserve.

Conclusion

Laparoscopy is the most preffered method for dermoid cystectomy. The procedure ease depends on surgeon expertise. Laparoscopic approach allows proper exposure of Cul de sac and allows forceful jet lavage aspiration ensuring pelvic clean out from any microscopic material of the dermoid cyst.

Acknowledgments

Author would like to thank Dr Vidya V Bhat for the support and the work.

Funding: No funding sources.

Conflict of interest: None declared

References

1. Powell J. Benign adnexal masses in the adolescent. Adolesc Med. 2004; 15:535-547.
2. Damjanov I, Linder J, Anderson W. Anderson's Pathology. Damjanov, I.; Linder, J., editors. St. Louis: Mosby; 1996, 1-2900.
3. Ayhan A, Bukulmez O, Genc C, *et al*. Mature cystic teratomas of the ovary: case series from one institution over 34 years. Eur J Obstet Gynecol Repro Biol. 2000; 33:153-157.
4. Templeman C, Fallat M, Lam A, *et al*. Managing mature cystic teratomas of the ovary. Obstet Gynecol Surv. 2000; 55:738-745.
5. Caruso P, Marsh M, Minkowitz S, *et al*. An intense clinicopathologic study of 305 teratomas of the ovary. Cancer. 1971; 27:343-348
6. Shalev E, Bustan M, Romano S, *et al*. Laparoscopic resection of ovarian benign cystic teratomas: experience with 84 cases. Hum Reprod. 1998; 13:1810-1812.
7. Hoffman B, Schorge J, Schaffer J, *et al*. Benign general gynecology. In: Williams gynecology. 2nd edn. New York: McGraw Hill, 2012, 266-9.
8. Berek JS. Benign diseases of the female reproductive tract. In: Rinehart RD, ed. Berek & Novak's gynaecology. 15th edn. Lippincott Williams & Wilkins, 2011, 583.
9. O'Neill KE, Cooper AR. The approach to ovarian dermoids in adolescents and young women. J Pediatr Adolesc

Gynecol. 2011; 24:176-80.
10. Templeman CL, Hertweck SP, Scheetz JP, *et al*. The management of mature cystic teratoma in children and adolescents: retrospective analyses. Hum Reprod. 2000; 15:2669-72.
11. Yan L, *et al*. Gynecology and Minimally Invasive Therapy, 2016; 5:161e165.
12. Kim MJ, Kim NY, Lee DY, Yoon BK, Choi D. Clinical characteristics of ovarian teratoma: age-focused retrospective analysis of 580 cases. Am J Obstet Gynecol. 2011; 205(32):e1e32.e4.