Adolescent laparoscopy

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Summary

Laparoscopy is a useful and safe diagnostic procedure that provides excellent visualization of the pelvic structures and often permits the diagnosis of gynecologic disorders and pelvic surgery without laparotomy. During the period 1994-1996 40 laparoscopies were performed as a diagnostic procedure on adolescents aged between 14-19 years. In 21 cases of primary amenorrhea the laparoscopy showed 12 cases of Rokitanski-Kuster-Hauser syndrome (57.2%), hematocolpos-hematometra 4 (19.0%), polycystic ovarian disease 2 (9.5%), late onset of puberty 2 (9.5%) and gonadal dysgenesis 1 (4.8%). Laparoscopy which was performed in 12 cases of pelvic pain showed 6 with normal genitalia (50%), endometriosis in 2 (16.7%, infection in 2 (16.7%), fibroma in 1 (8.3%) and torsion in 1 (8.3%). Four laparoscopies were performed for ovarian mass; three cystic masses and one case of endometriosis were detected.

Key words: Laparoscopy, Adolescence.

Introduction

The credibility of laparoscopy as a diagnostic procedure together with the rarity of complications has made the predominance of this method a basic diagnostic tool in gynecology. The laparoscopy technique is rapidly performed, can be applied to all ages with a low morbidity rate and a short convalescence period and is less demanding in terms of medical facilities, supplies and personnel. It also allows us to observe the interior genital organs, take guided biopsies and to do some surgical interventions. During the ten years our departments of Pediatric and Adolescent Gynecology have functioned, laparoscopy has been used as a diagnostic procedure especially in cases where accurate assessment of the interior genital organs is required.

This paper reports our experience and consideration of the use of laparoscopy in a series of patients who were seen during a three-year period from 1994-1996.

Material and Methods

From all the adolescents aged between 14-19 years who were examined in our departments in a 3-year period, 40 were submitted to laparoscopy as a diagnostic procedure. A detailed medical and social history and gynecological examination is usually done in all cases. Other investigations were only done if indicated.

Twenty-one cases of primary amenorrhea, 12 pelvic pain, four ovarian masses, one oligomenorrhoea, one chromosomal anomaly and one second-look case were examined laparoscopically during this period. Biopsy specimens and peritoneal fluid were obtained when indicated.

Laparoscopy was performed through a subumbilical incision by means of a Storz 8mm direct vision telescope, with insufflation of carbon dioxide through the single side channel on the sheath, controlled by a standard Storz laparoscopy insufflator with automatic pressure control facility. A double-puncture technique was always used with a probe inserted through a low midline incision; on some occasions a third puncture was made for insertion of additional surgical or manipulative instruments. The peritoneal cavity was inspected systematically with special attention to all accessible surfaces of the pelvic organs.

Received April 28, 1997
revised manuscript accepted for publication June 5, 1997

Results

The indications for the laparoscopies were primary amenorrhea, pelvic pain, ovarian mass, oligomenorrhoea, chromosomal anomalies and second-look (Table 1).

The endoscopic findings in 21 cases of primary amenorrhea were Rokitanski-Kuster-Hauser syndrome - 12 cases, hematocolpos-hematometra - 4 cases, polycystic ovarian disease - 2 cases, late onset of puberty - 2 cases, and gonadal dysgenesis - 1 case (Table 2).

The endoscopic findings in 12 pelvic pain cases showed six normal genitalia, two endometriosis, two infections, one fibroma and one torsion (Table 3). In case of adhesions, adhesiolysis was usually performed during laparoscopic examinations.

Laparoscopy of four cases with ovarian mass showed three cystic masses and one case of endometriosis (Table 4).

In the case of oligomenorrhoea normal interior genital organs were found.

Table 1. — *Indications for laparoscopy*

Indication	No of cases	%
Primary amenorrhea	21	52.5
Pelvic pain	12	30.0
Ovarian mass	4	10.0
Oligomenorrhea	1	02.5
Chromosomal anomalies	1	02.5
Second-look	1	02.5
Total	**40**	**100.0**

Table 2. — *Endoscopic findings in primary amenorrhea*

Laparascopic diagnosis	No of cases	%
Rokitanski-Kuster-Hauser	12	57.2
Hematocolpos-hematometra	4	19.0
Polycystic ovarian disease	2	09.5
Late onset of puberty	2	09.5
Gonadal dysgenesis	1	04.8
Total	**21**	**100.0**

Table 3. — *Endoscopic findings in pelvic pain*

Laparascopic diagnosis	No of cases	%
Normal	6	50.0
Endometriosis	2	16.7
Infection	2	16.7
Fibroma	1	08.3
Torsion	1	08.3
Total	**12**	**100.0**

Table 4. — *Laparascopic evaluation of ovarian masses*

Laparascopic diagnosis	No of cases	%
Cystic mass	3	75
Endometriosis	1	25
Total	**4**	**100.0**

The endoscopic findings of a 45X0 karyotype case showed a hypoplastic uterus size 2x2 cm, normal tubes and hypoplastic ovaries size 1x2 cm. Biopsies of the two ovaries were obtained.

A second-look laparoscopy was performed in a 14-year-old girl nine months after right ovariectomy because of ovarian mass. The histological examination showed a borderline tumor. No suspicion of disease was observed, peritoneal rinse and left ovary biopsy were obtained.

No complications were observed and most of the patients left the hospital 10-24 hours after the intervention. No prevention therapy was needed. In some cases prevention therapy with Tetracycline (one tablet of 100 mg per day) was prescribed.

Discussion

Laparoscopy is a useful and safe diagnostic procedure that provides excellent visualization of the pelvic structures and often permits the diagnosis of gynecologic disorders and limited surgery in many cases where laparotomy would otherwise be necessary. The advantages, include minimal stress, minimal abdominal lesions, reduced time of anesthesia, less postoperative adhesions, short hospitalization and the possibility of repetition. Thus it is defined as a basic diagnostic method in gynecology.

The macroscopic findings alone allow a very good approach to diagnosis and sometimes biopsy may be performed to obtain a histologic study. In some cases of ovarian cyst laparoscopy may have a therapeutic value in permitting puncture of the cyst if there is no suspicion of malignancy.

In most cases of intersexuality, the exact diagnosis and management can not be established without accurate knowledge of the internal genitalia and hidden gonads. For this reason, laparoscopy may replace exploratory laparotomy. In acute abdomen, laparoscopic exploration might be very helpful for the differential diagnosis of several conditions.

Operative laparoscopy has gained widespread acceptance as the procedure of choice for an increasing variety of gynecologic procedures. The growth of this advanced surgical procedure has had a strong impact on treatment modalities for adolescent patients.

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