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Assessment of Five Years of Endoscopic Activity in a Maternity Hospital in the Suburbs of Dakar

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Abstract

Introduction: The practice of minimally invasive surgery in Senegal occupies more and more of a preponderant place in fields that previously did not allow it. Thus in our practice in gynecology we are witnessing an explosion of these operative indications especially for benign adnexal pathology. **Patients and Method**: The objective of this study was to evaluate the evolution of laparoscopic practice in terms of frequency, indication of duration and operative complications. For this reason, we have collected all the laparoscopic procedures carried out at the Gynecology and Obstetrics Department of the Pikine National Hospital since January 1st, 2012 over a period of 60 months. Endoscopic surgery accounted for 20.1% of all gynecological and breast procedures. There were 195 cases (14.9%) of laparoscopic surgery and 69 cases (5.2%) of operative hysteroscopy. The average age of our patients was 34 years with extremes of 15 and 67 years. The intervention was motivated by the exploration or management of infertility in 101 cases, or 57.1% of patients. Laparoscopy remained exploratory in 15.3% of cases (279 patients) with 55 cases of ovarian tumors presumed to be benign. The mean duration of diagnostic laparoscopy was 39 min with extremes of 20 to 150 min; while that of operative laparoscopy was 59 min with extremes of 20 to 250 min. It was noted that 4 cases of laparoconversion are 2.8% of all patients in our series. The postoperative course was 99.4% simple. **Conclusion**: In our practice and as in the developed countries, we are witnessing a considerable decline in the indications of laparotomy to the profile of laparoscopy, especially for benign adnexal pathology and infertility. An extension to the gynecological malignant pathology is the ultimate challenge.

Keywords

Endoscopy, Gynecology, Pikine

1. Introduction

Laparoscopy is certainly the most important progress of the last decades in surgery. Promoted in 1940 by Raoul Palmer to exclusively diagnostic in the context of the exploration of female infertility, laparoscopy became, in half a century, a surgical discipline in itself, both in gynecology and in many other specialties [1]. The field of his indications has considerably enlarged and his contraindications have been reduced with the development of the material and the instrumentation and the progress of anesthesia and resuscitation. The practice of minimally invasive surgery in Senegal occupies more and more of a preponderant place in fields that previously did not allow it. Thus, in our practice in gynecology, we are witnessing an explosion of these operating indications especially for benign adnexal pathology.

2. Patients and Methods

This is a retrospective and descriptive study that focuses on a continuous series of cases of laparoscopy in diagnostic or operative at the National Hospital of Pikine. We collected all patients who underwent laparoscopic intervention in the department during the study period from January 1, 2012 to December 31, 2016 (60 months). For each patient, we compiled an individual survey form and studied the following parameters: socio-demographic and clinical parameters such as age, gestity, parity, antecedents and causal pathology; operative data, in particular indications, the progress of the laparoscopic act, the gestures possibly made, as well as the incidents and the operating difficulties and finally the operative follow-up in the short, medium and long term. We excluded cases where records were not available. Data were collected from patient charts, operative report cards, and patient interview data by telephone to complete missing information and sign their consent.

This data was captured and analyzed using the Sphinx version 5 software. The graphics were made by Microsoft Excel for Windows 2016. The correlation examination and the significant risks that existed between the variables during the analysis were performed using adequacy and comparison tests. The Chi-square test was used for comparisons. The tests were significant as soon as the associated probability was less than 5%. We used the null hypothesis if α was less than 0.05. If the null hypothesis was rejected, we proceeded to the analysis of the relation. Otherwise, the relationship was simply removed from the study.

In our study, we found some limitations such as the retrospective nature and some missing data in the files that we tried to fill during the interviews and finally the small size of the cohort.

3. Results

We obtained the following results.

3.1. Frequency

Endoscopic surgery accounted for 20.1% of all gynecological and breast inter-

ventions performed between 2012 and 2016 (Table 1). There were 195 cases (14.9%) of laparoscopic surgery and 69 cases (5.2%) of operative hysteroscopy.

Overall, we observe a remarkable evolution of the frequency of the endoscopic approach from 2016, when it was stable from 2012 to 2015. This considerable increase in endoscopic surgery (laparoscopic surgery and operative hysteroscopy) contrasts with a relatively slight decrease in laparotomy (Figure 1).

3.2. Age

The average age of our patients was 34 years with extremes of 15 and 67 years. The highest age frequency was between 31 and 40 years of age representing 46.9 to 7.4% of the workforce.

3.3. Opérative Data

We counted 35 patients with a history of abdominopelvic surgery including a laparoscopic procedure and 34 cases of laparotomy. Among these antecedents of laparotomy we know 8.5% ovarian cystectomy, 7.3% caesarean section, 2.4% myomectomy, 1.2% for ectopic pregnancy cure. Most patients were followed for infertility, this was the case for 108 cases, or 61%. In the other situations (41 patients, 23.1%), pelvic pain was present and 3.3% for a pelvic mass 8.5%.

3.4. The Pathologies Supported

The interventions were motivated by the exploration or management of infertility in 101 cases, or 57.1% of patients. Tubal obstruction was found in 20.3% of cases

Table 1. Distribution of the different surgical approaches used in gynecological and mammary pathology at the National Hospital of Pikine between 2012 and 2016.

Years/Surgery	2012 n (%)	2013 n (%)	2014 n (%)	2015 n (%)	2016 n (%)	Total n (%)
Vaginal way	29 (12.1%)	28 (12.5%)	22 (10.3%)	35 (12%)	39 (11.5%)	153 (11.7%)
Laparotomy	111 (46.3%)	112 (50%)	104 (48.6%)	141 (48.6%)	145 (42.6%)	613 (46.8%)
Endoscopy	50 (20.8%)	35 (15.6%)	33 (15.4%)	41 (14%)	105 (30.9%)	264 (20.1%)
Mammalogy	50 (20.8%)	49 (21.9%)	55 (25.7%)	75 (25.7%)	51 (15%)	280 (21.4%)
TOTAL	240 (100%)	224 (100%)	214 (100%)	292 (100%)	340 (100%)	1310 (100%)

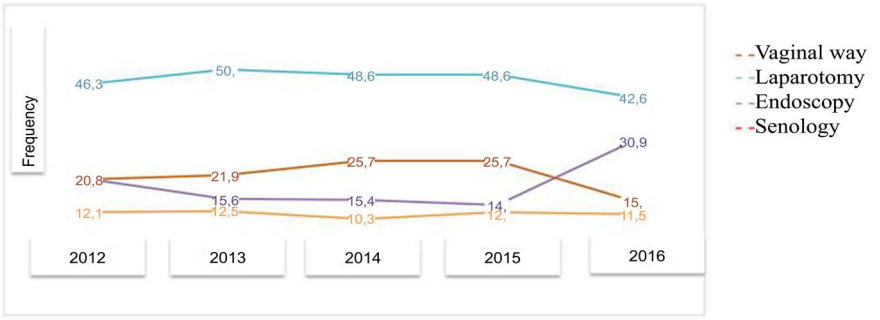

Figure 1. Evolution of the different surgical approaches used in gynecological and mammary pathology at the National Hospital of Pikine between 2012 and 2016.

(36 patients); there were 19 cases of bilateral obstruction and 17 cases of unilateral tubal obstruction. In our population we found 45 cases of benign ovarian tumor, 25.54% of the series. The third most common pathology of our series was the intrauterine device migration in the pelvic cavity observed in 3.94% of the cases, *i.e.* 7 patients. Laparoscopic treatment of ectopic pregnancy was also performed in 5 patients (2.28% of cases). Pathologies other than those mentioned above have also benefited from laparoscopic management; this is microcystic ovarian dystrophy that is resistant to medical treatment, adnexal torsion, and benign endometrial pathology requiring hysterectomy. We used exploratory laparoscopy in 87 of our patients, that is 4.51% of the population for genital malformation (Rokitansky syndrome) and for exploration for a suspected malignancy of the pelvic tumor. Table 2 reports the different pathologies supported in our structure.

3.5. Operative Data

The laparoscopy remained exploratory in 15.3% of the cases (no action had been taken) (279 patients) and in 84.7% of the cases (128,150 patients), an operative gesture was realized. Patients operated on for infertility accounted for 57.1% of the population. This laparoscopy was pure exploratory in 19 cases, and was accompanied by an operative gesture in 82 cases. In 8 cases (4.5%) an ovarian and peritoneal biopsy was performed for pelvic tumor suspected of malignancy (Table 3). This exploration allowed the diagnosis of 2 cases of peritoneal tuberculosis and 4 cases of ovarian cancer with peritoneal carcinomatosis. There were 55 (31.2%) patients undergoing presumed benign ovarian tumor. Dermoid cysts accounted for 45.5% of tumors, followed by serous cysts and endometriotic cysts in 20% and 21.8%, respectively. Twelve cases of hysterectomy (6.8%) were performed in our study. The indications were uterine myomatosis or

Table 2. Distribution of patients operated by laparoscopic surgery at the National Hospital of Pikine according to the pathology found.

Pathologies	Number of cases n = 177	Percentage
Tubo-peritoneal infertility	97	54.8%
Ovulatory infertility (dystrophic ovaries)	4	2.28%
Ovarian cyst	45	25.54%
IUD migration	7	3.9%
Ectopic pregnancy	5	2.8%
Pelvic chronic pain	3	1.7%
Benign pathology of the uterus	6	3.4%
Cervical pathology (dysplasia)	3	1.7%
Cervical pathology (dysplasia)	6	3.4%
Malformation of the internal genital organs	1	0.6%

Table 3. Distribution of patients operated by laparoscopic surgery at the National Hospital of Pikine according to the surgical procedure.

Operative procedures	Number of cases (n = 177)	Percentage
Adhesiolysis + tubal surgery	67	34.5%
Cure of ovarian cyst	55	31.2%
Hysterectomy	12	6.8%
Cure of ectopic pregnancy	5	2.8%
IUD withdrawal	7	3.9%
Proof in blue	19	20.4%
Biopsy	8	4.5%
Ovarian drilling	4	2.2%

adenomyosis (33.3%), an endometrial polyp (16.7%), cervical dysplasia (25%), chronic pelvic pain (8.3%) and a cyst of the ovary (16.7%).

3.6. Duration of Intervention

The mean duration of diagnostic laparoscopy was 39 min with extremes of 20 to 150 min; while that of operative laparoscopy was 59 min with extremes of 20 to 250 min (Table 4).

3.7. Incident and Accidents

It has been noted 4 cases of laparo-conversion that is 2.8% of all the patients of our series. The reason of this conversion was an impossibility to access of the pelvic cavity in 2 cases because of the adhesions, the presence of an important uterine myomatosis for 1 case, and a digestive injury in a last patient. For the latter, it was a digestive wound, specifically an opening of the ileum 4 cm during an attempt of adhesiolysis in a patient who consulted for infertility and had a history of laparotomy for appendiceal peritonitis. The operative follow-ups were simple after a conservative suture. Note, however, that mortality was zero.

3.8. Operative Suites

There were simple after 99.4% of our interventions. The only postoperative complication was umbilical oozing due to a likely allergy to the plaster. The average duration of hospitalization was 3 days with extremes of 2 of 5 days.

4. Discussion

In the light of these different results, we can say that the practice of laparoscopy in our work context, largely dominated by the management of obstetric emergencies, takes place in the therapeutic arsenal. With an increase in the number of operators, this activity should jump in the coming years. Similarly, an extension of operative indications to surgery for genital prolapse and gynecological cancers

Table 4. Distribution of patients operated by laparoscopic surgery at the National Hospital of Pikine according to the duration of the operation.

Type of intervention	Duration of intervention (minutes)
Adhésiolysis	56
Ovarian cyst	67
Hystérectomy	78
Salpingectomy	60
IUD withdrawal	41
Proof in blue	34
Biopsy	62
Salpingo-ophorectomy	54
Ovarian drilling	42

including cervical cancer and endometrial cancer should be considered. In our series, the age group of 31 - 40 years predominated with 49.6%. In the laparoscopic series, Mbaye [2] in Senegal found that 41.8% of the patients were between 36 and 45 years old. Togola [3] in Mali, on a serie of 1,227 patients, found 74.6% of patients with an age between 21 and 40 years. And in the Mirghani series [4] in Sudan, the average age was 26.7 years with extremes of 16 and 42 years. In our study the indication was dominated by infertility in 57% of cases. The primary type infertility was the most common (54 cases of primary infertility with 30.5% of patients against 22% for secondary infertility). This predominance of the primary type was also found in the study of Ait Batahar [5] in Morocco where 56% of the patients had primary sterility in 48 cases. At the University Hospital of Clermont-Ferrand (France) a study done in 2006, showed that in 62.9% of cases it was a primary infertility. By contrast, in the Mbaye study [2] (Senegal), there was a greater predominance of secondary infertility with 45.9% of cases and 31.6% of primary type.

With regard to ectopic pregnancy, the indication for laparoscopic management was posed in 5 patients, *i.e.* 2.8%. In the Mbaye study [2], the number of patients remains the same with a percentage of 5.1%, and in the Togola study it represents 3.3% of the gynecological indications. In the Hussain study, 79 cases of ectopic pregnancy were collected and accounted for 3.1% of all emergencies. Laparoscopy is currently the key to diagnosis in the ectopic pregnancy, the first operative time is diagnosed, laparoscopy will allow its confirmation, the location and treatment. All our cases are uncomplicated forms (no broken form) testifying to a diagnosis that was made in time.

These figures are in apposition with the Boudhraa study, and Alqui on a study of 107 cases of ectopic pregnancy obtained 63.07% of uncomplicated forms and 15.38% of broken forms. The migration of an intrauterine device to copper is a real fact and explains most of the failures of this method. The insertion of an IUD is a common technical act and the practitioner must master the technique

of placement because in certain situations, this insertion can be followed by significant complications, among them we find the uterine perforations whose incidence is rare and does not exceed 1.3 per 1000 poses, according to large clinical trials reported [6]. In our study we reported 7 indications of IUD migration, *i.e.* 3.9% of patients. These perforations may be partial, when only part of the IUD pierces the wall of the uterus or the cervix, or complete, when the IUD crosses the lining of the uterus to enter the abdominal cavity [7]. In our serie, it was a complete passage of the device in the pelvic cavity (epiploon, broad ligament, fallopian tube). In addition, the contribution of this approach was essential to correct the diagnosis in certain situations, such as the case of tuberculosis and peritoneal carcinomatosis in gynecological malignant tumors and ascites of undetermined cause.

5. Conclusion

In our practice and as in the developed countries, we are witnessing a considerable decline in the indications of laparotomy to the profile of laparoscopy, especially for benign adnexal pathology and infertility. An extension to the gynecological malignant pathology is the ultimate challenge.

References

[1] Schlogel, G. (1996) Raoul Palmer and the Coelio-Surgical Adventure from 1940 to 1995. *Histoire des Sciences Médicales*, **30**, 281-287.

[2] Mbaye, M. (2004) Bilan des activités coelioscopique à la clinique Gynécologique et Obstétricale Hopital Aristite Le Dantec. Thèse Médecine, UCAD, Dakar.

[3] Togola, M.F. (2006) Coeliochirurgie au Mali Bilan de 9 ans et 4 mois de pratique. Thèse Médecine, Université de Bamako, Bamako.

[4] Mirghani, O.A., *et al.* (1999) Babiker Experience with Gynecological Laparoscopic in Wad Medani Hospital, Sudan. *East African Medical Journal*, **76**, 390.

[5] Ait Batahar, S. (2008) Place de la coelioscopie dans le traitementde la sterilite tubo-peritoneale. Thèse Médecine, Université Cadi Ayyad Faculté de Médecine et de Pharmacie de Marrakech, Marrakesh.

[6] Treiman, K., Laurie Liskin, S.C.M., Adrienne, K., *et al.* (1995) Les DIU: état récent des informations. *Population Reports* (*Séries B*), **6**, 1-35.

[7] Boutaina, L., Moulay, R.H., Abdelgheni, Z., Houda, F., Jaouad, K., Driss, M.R. and Mohamed, D. (2014) Le stérilet migrateur: à propos de deux cas et revue de la littérature. *Pan African Medical Journal*, **19**, 361.