

Audit on gynecological surgeries at AL-Zahraa University Hospital 2017

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Abstract: Background: Surgical audit is a systematic, critical analysis of the quality of surgical care that is reviewed by peers against explicit criteria or recognized standards, and then used to further inform and improve surgical practice with the ultimate goal of improving the quality of care for patients. **Objective:** This study is aimed to determine the rate of all gynecological procedures performed in Al-Zahraa University Hospital during the year of 2017, common gynecological procedures, and their indications, complications and days of hospital stay for each operation. **Methods:** This is a retrospective study of all gynecological surgeries performed in the Department of Obstetrics and Gynecology in Al-Zahraa University Hospital in 2017. Records from history sheets and files of the patients admitted for gynecological operations were collected. Information was gathered regarding age, parity, complaints, investigations and preoperative diagnosis / indications of operations, type of operations, intra and postoperative complications. There were no exclusion criteria. **Results:** Laparoscopic surgeries were the commonest type among the gynecological surgeries done during the period of the study (33.5%) followed by Hysterectomy (28.1%) , D&C and its subtypes (14.9%), Genital prolapse surgeries(6.8%), Ovarian operations through laparotomy(4.1%), Abdominal myomectomy(3.2%), Exploration(3.2%), Hysteroscopy(2.3%), Removal of missed IUD, Resection of rudimentary horn, Vulval operations and Operations for the hymen were done equally (0.9%).Salpingectomy was the least common operation performed(0.5%). **Conclusion:** This study recorded the rate of all gynecological operations reported at Al Zahraa University Hospital in 2017, their indications , complications and days of hospital stay for each operation.

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1.Introduction

Surgical audit is an important strategy in maintaining standards in surgical care at the clinical level. Surgical audit is a systematic, critical analysis of the quality of surgical care that is reviewed by peers against explicit criteria or recognized standards, and then used to further inform and improve surgical practice with the ultimate goal of improving the quality of care for patients (**Brazzelli et al, 2019**). The institute of internal auditor (IIA) defines operational audit as a systemic process of evaluating an organization's effectiveness, efficiency of operations under management's control and reporting to appropriate persons the results of evaluation for improvement (**Jämsen, J. 2020**). Gynecological operations including hysterectomy, D & C biopsy genital prolapse surgeries, laparoscopy and myomectomy are the commonest procedures in medical practice. Gynecological procedures are performed on the female reproductive system in non gravid women. They are performed for emergency or elective purposes. Emergency procedures are indicated Bartholin's abscesses and defloration injuries

amongst others, while elective ones can be performed for genital prolapse, obstetric fistulae, or even cancerous conditions (**Sizzi, O. et al, 2018**). The purpose of clinical audit is to improve the quality of patient care and outcomes through systematic evaluation of care against explicit criteria (setting a standard of care and measuring practice against this standard) and the implementation of change change (improvement where possible) (**Foy et al, 2020**).

Aim of the work

This study was aimed to determine the rate of all gynecological procedures performed in Al Zahraa University Hospital during the period from the beginning of January 2017 to the end of December 2017, common gynecological procedures, and their indications, cadre of surgeons and complications of these procedure.

2. Patients and Methods

This is a retrospective study of all gynecological surgeries performed in the Department of Obstetrics and Gynecology in Al-

Zahraa University Hospital in 2017. Approval has been obtained from research and ethics committee of the hospital.

The following data were collected about all studied gynecological surgeries:

- 1-Type of the operation.
- 2- Collection of available data about the patient history, examination, and investigations which might be found in registration file.
- 3- Indications of the operation.
- 4- Intra-operative and post-operative complications.

Inclusion criteria

All patients who underwent any gynecological surgery.

Exclusion criteria

There were no exclusion criteria.

Statistical-analysis

The recorded data were analyzed using IBM SPSS software package version 20.0. (Armonk, NY: IBM Corp) Qualitative data were described using number and percent. Quantitative data were described using range (minimum and maximum), mean, standard deviation, median and interquartile range (IQR).Significance of the obtained results was judged at the 5% level. So, p-value was considered significant as the following : P-value <0.05 was considered significant, P-value >0.05 was considered-insignificant.

3. Results:

A total of 221 gynecological operations were performed in the study period.

Table (1): Distribution of the studied cases according to the patients' complaint.

Complaint	No.	%
Vaginal bleeding	63	37.3
Abdominal pain	49	29.0
Seeking for pregnancy	43	25.4
Vaginal mass protrusion	12	7.1
Increasing abdominal contour	7	4.1
Urine incontinence	6	3.6
Stool incontinence	3	1.8
Vulval mass	2	1.2
Post defloration injury	1	0.6

This table shows that the vaginal bleeding was the most common patients' complaint during 2017.

Table (2):Distribution of the studied cases according to the type of operations.

Type of operation	No.	%
Laparoscopy	74	33.5
Hysterectomy	62	28.1
D&C and its subtypes	33	14.9
Genital prolapse surgeries	15	6.8
Ovarian operations through laparotomy	9	4.1
Abdominal myomectomy	7	3.2
Exploration	7	3.2
Hysteroscopy	5	2.3
Removal of missed IUD	2	0.9
Resection of rudimentary horn	2	0.9
Vulval operations	2	0.9
Operations for the hymen	2	0.9
Salpingectomy	1	0.5
Total	221	100%

This table shows types of operations that were done during 2017 with laparoscopy was the most common operation which constitutes 33.5% followed by hysterectomy which represents 28.1%.

Table (3): Distribution of the laparoscopic surgeries .

Laparoscopy	No.	%
Diagnostic	37	50.0
Therapeutic	37	50.0
Ovarian cystectomy	18	24.3
Ovarian drilling	16	21.6
Salpingectomy	2	2.7
Adhesiolysis	1	1.4
Total	74	100%

This table shows that the number of the diagnostic laparoscopic surgeries was equal to the number of the therapeutic laparoscopic surgeries. Ovarian cystectomy was the most common subtype of the laparoscopic surgeries.

Table (4): Distribution of hysterectomy and its subdivisions.

Hysterectomy	No.	%
Abdominal	53	85.5
TAH with BSO	30	48.4
TAH with unilateral salpingo-oophrectomy	3	4.8
TAH with BS with preservation of both ovaries	2	3.2
TAH with bilateral salpingectomy , unilateral oophorectomy	1	1.6
TAH with unilateral salpingectomy	1	1.6
Sub TAH with BS with preservation of both ovaries	12	19.4
Sub TAH with unilateral salpingectomy	2	3.2
Sub TAH with bilateral salpingectomy, unilateral oophorectomy	2	3.2
Vaginal	9	14.5
Vaginal hysterectomy with bilateral salpingo-oophrectomy	7	11.3
Vaginal hysterectomy with preservation of both ovaries	2	3.2
Total	62	100%

This table shows that abdominal hysterectomy was more frequent than vaginal hysterectomy and total abdominal hysterectomy with bilateral salpingo-oophrectomy was the most common subtype of hysterectomy.

Table (5): Distribution of D&C subtypes.

D&C	No.	%
D&C biopsy	19	57.6
Fractional biopsy	9	27.3
Endometrial polypectomy with D&C	3	9.1
Cervical polypectomy with D&C	2	6.1
Total	33	100%

This table shows that D&C biopsy was the most common subtype of dilatation and curettage operations.

Table (6): Distribution of the genital prolapse surgeries' subtypes.

Genital prolapse surgeries	No.	%
Classical repair	5	27.8
Sacropexy for uterine prolapse	3	16.7
Vaginal hysterectomy for uterine prolapse	3	16.7
Fothergill operation	2	11.1
Anterior repair	2	11.1
Classical repair with Kelly's suture	1	5.6
Posterior repair	1	5.6
Repair of complete perineal tear	1	5.6
Total	18	100%

This table shows that the classical repair was the most common type of the genital prolapse surgeries.

Discussion

An audit is important for planning purposes, to direct resource allocation, and can serve to improve clinical response and outcomes. It will serve to improve the quality of services delivered by all theater users. The quality of life of those undergoing such procedures is also improved in the long run (**Ferrari, F. et al , 2020**).

The aim of this work is to appraise the effectiveness and efficiency of gynecological surgeries performed in Al-Zahraa University Hospital during the period from 1 January 2017 to 31 December 2017.

Table (1) showed that vaginal bleeding was the most common patients' complaint during 2017.

In agreement with these results, **Al-Shyal et al., (2019)** showed that postmenopausal bleeding was the most common indication.

In contrast to these results, **Adesina et al., (2019)** showed that commonest complaints were secondary infertility (51.9%), primary infertility (24.1%), and chronic pelvic pain (11.2%).

In this study, as in table (2), it was found that laparoscopy was done more frequent than other operations followed by hysterectomy. These results are in agreement with those of **Takai et al. (2015)** who showed that the most common operation done was laparoscopy. The present study result is in disagreement with study done by **Anbreen et al. (2015)** that showed the most common gynecological surgery was hysterectomy (66%) of total gynecological surgeries included in their study.

Table (3) showed that the number of the diagnostic laparoscopic surgeries was equal to the number of the therapeutic laparoscopic surgeries. This study result is in disagreement with study done by **Adesina et al., 2019)** which revealed that diagnostic laparoscopies were done in 15.6%.

In contrast to these results, **Omokanye et al., (2017)** showed that (20%) of total laparoscopic surgeries included in their study were diagnostic laparoscopies, 80% of the total procedures were therapeutic laparoscopies.

Table (3) also showed that ovarian cystectomy was the most common subtype of the laparoscopic surgeries.

The findings of **Kim et al., (2015)** are in agreement with these results as they mentioned that ovarian cystectomy (49.1%), was the most common subtype of the laparoscopic surgeries.

The gynecologists performed hysterectomy through different routes like abdominally or vaginally. Selection of the route depends on surgeon's choice, indication of operation, type of disease and patient desire.

In the present study and as shown in table (4) it was found that abdominal hysterectomy was more frequent than vaginal hysterectomy and total

abdominal hysterectomy with bilateral salpingo-oophorectomy was the most common subtype of hysterectomy.

The present study agrees with the study done by **Salma Bhat et al., (2017)** that showed that TAH percentage was (76.6%) of total hysterectomies operations included in the their study while STAH percentage was (4%).

Gabriel et al., (2019) showed that majority of hysterectomies were carried out via the abdominal route, while the vaginal route constituted only 22.4%. This rate of vaginal hysterectomy was similar to 21% found in **Obiechina et al., (2010)**.

In the present study and as shown in table (5) it was found that D&C biopsy was the most common subtype of dilatation and curettage operations.

Matching these results, **Al-Shyal et al., (2019)** reported that D&C biopsy was the most common subtype of dilatation and curettage operations accounting for 75.6% & 82.9% respectively.

This study is in concordance with the result of the study done by **Chambers et al., (2009)** that showed D & C was done in 23% of woman had surgical management.

As shown in table (6) it was found that classical repair was the most common type of the genital prolapse surgeries.

In agreement with these results, **Al-Shyal et al., (2019)** showed that the classical repair was the most common operation of genital prolapse surgeries which represents 75.1% & 52%, followed by anterior repair which represents 8.3%, 4.0%, posterior repair which represents 0.0%.8.0% in 2018 and 2019 respectively.

The present study was not in line with study result that was done in Nigeria by **Yakubu et al., (2017)** that showed anterior colporrhaphy seen in 7.7%, posterior colpoperineorrhaphy 6.6%, and combined anterior colporrhaphy and posterior colpoperineorrhaphy 5.5%.

Conclusion and Recommendations

This study recorded the rate of all gynecological operations reported at Al Zahraa University Hospital in 2017, their indications, complications and days of hospital stay for each operation.

The most common operations performed at Al-Zahraa University Hospital within the period of 2017 were (Laparoscopic surgeries, Hysterectomy and D&C with its subtypes).

The study had few limitations. The audit is retrospective and might have been limited with problems of data storage and retrieval. It was also limited by the fact that the outcomes of these gynecological procedures were not audited.

Improvement in data storage method is advocated. This can be done by using computer assisted record system. A more regular audit of services rendered by the department is also advocated.

Conflict of interest

All the authors have declared that there are no conflict of interest.

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