

Original Article

Critical Review of Referred Patients in Tertiary Level Hospital

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Abstract

Objective: To determine frequency of morbid patients received in tertiary level hospital after primary surgery somewhere else at tertiary care Hospital.

Methodology: This Prospective Descriptive study was carried out in department of obstetrics and Gynaecology unit IV of Liaquat university hospital Jamshoro from first January 2019 to 31 December 2020. All patients received with complications after surgical intervention/delivery outside tertiary level hospital were included in study. Data collected on a structured proforma. Variable analyzed were demographic profile, incidence of morbidity, type of intervention, level of health care provider and type of complications.

Results: Total admission in study period was 5027, out of which 147 patients were admitted with primary surgery or intervention outside the tertiary level hospital giving frequency 2.84%. Common procedures performed were normal vaginal delivery and its complications followed by caesarean section. 84.63% cases were dealt by qualified person. Complications with which patients presented were septicemia, hemorrhage, suboptimal surgery and fistula.

Conclusion: Knowledge of incidence of moribund condition and its related mortality is vital in designing preventive strategies.

Key Words: Referred cases, surgical morbidity

Cite this article as: Madhudas C, Sheikh F, Mahmood A, Khurshid F, Lakho N, Saeed S. Critical Review of Referred Patients in Tertiary Level Hospital. J Soc Obstet Gynaecol Pak. 2021; 11(2):138-141.

Introduction

Obstetric and gynecological surgery has become integrated part of women health. Annually 187-281 million surgeries are performed it is almost double the annual volume of child birth.¹⁻² Although modern surgical care has an impressive armamentarium of surgical procedure. Even than Globally 7 million people suffer complication following surgery each year including one million deaths a magnitude that exceed maternal and AID related mortality 50% of these deaths and complications are preventable.¹ Surgery is performed to improve quality of life but it is not without hazards. Outcome of surgical procedure depend on type of surgery either elective or emergency, resources available to conduct surgery, place of surgery,

operative skill of surgeon, resources of anesthesia person and its expertise, availability of intensive care unit and patient factors such as other comorbidities. Provision of competent initial surgical care can minimize preventable deaths as well as minimize disability. With passage of time health situation in high income countries has improved morbidity due to surgery is 3 to 22% and mortality is 0.4 to 0.8 %.³⁻⁴ But complication due to surgery and mortality is high in low income countries.⁵⁻⁷ Complications are much more specially in patients who are operated in small centers by surgeon who are not skill enough to handle every type of emergency. Our hypothesis is that if surgical care and surgical procedure is performed in tertiary level hospital complication are less as compare to

Authorship Contribution: ¹Conceived, designed, Proof Reading, ^{2,3} Manuscript writing, collected data and did statistical analysis, editing of manuscript.^{5,6}design, data collection and contributions to drafting the work

Funding Source: none

Conflict of Interest: none

Received: Jan 23, 2021

Accepted: June 11, 2021

procedure performed in small clinics, private centers or in primary and secondary level hospitals where there are neither surgical expertise nor there is multidisciplinary approach to deal every type of emergency or elective surgery. In this study we included all the patients who were received in tertiary level hospital with surgical complications after intervention in surrounding surgical set ups to determine frequency, morbidity and mortality in these patients.

Methodology

This is prospective descriptive study carried out in our tertiary care gynaecological unit over a period of one year from first January 2019 to 31 December 2020. As no intervention was exercised on patients so only departmental approval for study was obtained and informed consent from patient's attendant was taken. All patients received with complications after surgical intervention/delivery outside tertiary level hospital were included in study. Referred high risk cases, self-referred cases and patients who developed complications during management in gynaecological unit IV were excluded from study. Data was collected from patient and attendant's history, discharge and referred notes of primary operation Data was entered on a predesigned proforma. Information extracted includes demographic profile, frequency, level of surgeon, primary gynaecological or obstetric intervention, type of complication and maternal mortality. All patients were evaluated by history, clinical examination and investigations including complete blood count, liver function tests, renal function test, urine analysis, urine culture and sensitivity and high vaginal swab and abdominal and pelvic ultrasound which ever needed. Data was entered and analyzed in SPSS version 18.

Results

During study period out of 5027 patients 147 presented with complications after either vaginal delivery or surgical intervention outside tertiary level hospital.

Table I shows demographic characters. Mean age was 25.25 and mean parity was 3.40.17. 55.94% patients belong to urban areas and 44.05% patients were from rural areas.

Table II shows type of surgery intervention done during study cases. In 82.4% primary intervention was done by doctors and 34.4% of intervention was elective.

Table I: Demographic characters of studied cases (n=143)

Variables	N(%)
Age (Mean \pm SD)	25.25
Parity (Mean \pm SD)	3.40.17
Marital status	
Married	139(97.2%)
Unmarried	4(2.79%)
Residence	
Rural	63 (44.05%)
Urban	80 (55.94%)
Education	
Illiterate	98(68.53%)
Literate	45(31.46%)

Table II: Type of procedure in the study cases (n=143)

Procedure	N (%)
NVD with episiotomy	73 (51.04)
Caesarean section.	39 (27.27)
Emergency caesarean section	20 (13.98)
Elective caesarean section	19 (13.28)
Laparotomy	11 (7.69)
Abdominal hysterectomy	8 (5.59)
Incomplete miscarriage after D and C	7 (4.89)
Vaginal hysterectomy	3 (2.09)
Caesarean scar pregnancy after D and C	2 (1.39)

Table III: Morbidity and mortality in study cases (n=143)

Complications	N (%)
Septicemia	70 (48.95)
Hemorrhage	46 (32.16)
Suboptimal surgery	9 (6.29)
Mortality	7 (4.89)
Wound hematoma	5 (3.49)
Vesico-vaginal fistula	6 (4.19)
Rectovaginal fistula	2 (1.39)
Intestino-vesical fistula	1 (0.69)

Discussion

Surgical care is essential component of effective health delivery system and vital for long and healthy life. The assessment of quality of surgery in any setting is very much important to understand need of improvement at different level. In 2002 World Bank reported that an estimated 164 million disability adjusted life years representing 11% of entire disease burden were related

to surgically treated conditions⁸. Every year 77.2 million of this disability adjusted life years can be averted by improving basic surgical capacity and its quality at primary level hospital.⁹ Risk of surgery exist in every part of world but due to improvement in health system and timely and competent surgical management its frequency is less in high income countries as compare to low income countries.¹⁰ No of studies in Pakistan are carried out in tertiary level hospital to review either complication of surgery within tertiary level hospital or study of particular complication in referred cases in tertiary level hospital.¹¹⁻¹⁵ While current study is different in the way that it assesses the magnitude of problem in patients who had intervention either in private clinics, or small hospitals where primary surgeon either was not qualified or not subject specialist. As in our study though 82.5 % were doctors but from this 55.94% were only M.B.BS doctors, 13.94% were diploma holders, 9.79% were male surgeon and only 2.75% were qualified experienced surgeon while in study from Bangladesh one six of surgeries were done by non-gynecologist surgeon and one six by gynaecological surgeon.¹⁶ This all show that due to lack of audit and accountability we are not only losing precious lives but many more are left with disability for rest of their lives.

In our study 143(2.84%) patients were received in moribund condition after primary surgery outside tertiary level hospital. Almost all of these patients were in reproductive age without any comorbidity. 51% had normal vaginal deliveries and 30.4% had elective surgeries. To loose precious lives or to give disabilities or prolong life long suffering due to elective procedures is ridiculous. 7(4.89%) patients could not survive this mortality though less than any direct cause of maternal mortality in Pakistan¹⁷ but is much more than mortality after surgical complication in developed countries.¹⁸⁻¹⁹

Major complication with which patient presented were septicemia (48.95%), hemorrhage (32.16%), fistulae (6.29%) and suboptimal surgery (6.29%). In 18 and 19 centuries septicemia was leading cause of maternal mortality but after introduction of aseptic technique of hand washing, introduction of carbolic acid and introduction of germ theory in 18 century mortality and morbidity due to septicemia has been much less in developed world.²⁰⁻²¹ But as in current study and also other studies from same institute and other studies from Pakistan scenario has not changed.¹³ To implement aseptic measures during delivery and during surgery is not expensive it only need awareness and

proactivity amongst health care professionals to exercise aseptic techniques and to identify and treat maternal sepsis. Historically hemorrhage has been significant cause of maternal morbidity and mortality in low resources countries. Though obstetric hemorrhage is a catastrophic emergency but in many high income countries maternal mortality and morbidity due to hemorrhage is on decrease due to availability of resources and therapeutic options.²² In Pakistan maternal mortality due to hemorrhage varies from 7.1% to 27.1% in different studies and according to Pakistan demographic survey²³⁻²⁵ 34% patients in current study presented with hemorrhage but what was different in current study that all these patients do not had post-partum hemorrhage due to tone, tissue, trauma or thrombus but in 5(3.49%) patients either primary diagnosis was wrong or there were suboptimal surgery.

That is in two patients it was caesarean scar ectopic and both these patients were managed as missed miscarriage and ended in massive hemorrhage and received in our unit in critical condition. While three patients had major placenta previa and in these patients subtotal hysterectomy was done as these patients need total hysterectomy. Two more patients presented with bleeding after hysterectomy due to abnormal uterine bleeding actually bleeding in these particular patients were due to carcinoma of cervix and suboptimal surgery was done in both of these patients. Technician dependent surgery is very much common in our part of world; most of surgeries were carried out by doctors who were only M.B.B.S and had received training in tertiary level hospital for period of six month to two years and running their private maternity homes.

Whenever any patient they book either with any gynecology or obstetric problem, they operate behind their limitation by involving general surgeon or technician. Unless a strong system of awareness, accountability, feedback and audit will not be strongly exercised such type of scenario cannot be changed. In low income countries most of genital fistulae are due to obstetric labour²⁶. But in current study we received 9(6.29%) patients with different type of fistula. six patients had vesico-vaginal fistula, two patients had recto-vaginal fistulae and one patient had intestine-vesical fistula. Out of six patients five (55%) had abdominal hysterectomy rather than obstetric labour. This trend is seen in developed countries were 50% of bladder injuries are due to abdominal hysterectomy.²⁷

Though surgery is performed to improve quality of life but results of current study are dismal. It looks that there are certain lapses in training chain of health care provider that should be addressed. These disability and mortalities are preventable. Only need is change in system, individual will power and behavior

Conclusion

Knowledge of incidence of disability and mortality associated with surgery is vital in designing preventive strategies. All of us understand that surgery is associated with some risk even in best hands. As the cause of adverse outcome in surgery are multifactorial than the mean by which we minimize harm are many. We can minimize harm by revisiting training program of our health care provider, by refreshing courses, by accountability, feedback and audit.

References

- Weiser TG, Regenbogen SE, Thompson KD, Haynes AB, Lipsitz SR, Berry WR, Gawande AA. An estimation of the global volume of surgery: a modelling strategy based on available data. *The Lancet*. 2008 Jul 12;372(9633):139-44.2.
- Population reference bureau 2006.[http://www.prb.org/pdf06/06_world Data sheet.pdf](http://www.prb.org/pdf06/06_world_Data_sheet.pdf).
- Gawande AA, et al. The incidence and nature of surgical adverse event in Colorado and Utah in 1992. *Surgery* 1999;126:66-75.
- Kabel AK, et al. Adverse event in surgical patients in Australia. *International journal of quality of health care* 2003; 14:269-76.
- Bickler SW, et al. Epidemiology of pediatric surgical admission to a government referral hospital in Gambia. *Bullworld Health Organ* 2000;78:1330-1336.
- Yii MK, et al. Risk-adjusted surgical audit with POSSUM scoring system in a developing country. *British Journal of surgery*.2002; 89:110-13.
- SJ Mc Conkey .Case series of acute abdominal surgery in rural Sierra Leone. *World Journal of surgery* 2002;26:509-13.
- Dean T Jamison, Joel G Breman, Anthony R Measham and others. *Disease control priorities in developing countries 2nd edition*. Washington DC: The international bank of reconstruction and development/ The world bank; New york: Oxford University press;2006.ISBN-10-0-8213-6179-1
- W stophen,G Tom and others. *Global Burden of surgical conditions; chapter2:7*.
- Noordzij PG, Poldermans D, Schouten O, Bax JJ, Schreiner FA, Boersma E. Postoperative mortality in The Netherlands: a population-based analysis of surgery-specific risk in adults. *The Journal of the American Society of Anesthesiologists*. 2010 May 1;112(5):1105-15.
- BhuttaSZ , Aziz S ,Korejo R .Surgical complications due to unsafe abortion. *JPMA* July 2003;53(7) :286-9.
- Madhu C, Khurshid F, Sirichand P.Maternal mortality and morbidity due to induced abortion comparison of two periods. *Annals of PIMS* 2010;6(3): 139-41.
- Madhu.C,Khurshid F,Sirichand Morbidity and mortality associated with puerperal sepsis. *JLUMS* .2011; 10(3): 121-3.
- Mohsin R, Akhter M, Zubari N. Review of comparison of complication of vaginal hysterectomy with and without concomitant surgery for SUI. A five year experience at tertiary level hospital of Pakistan. <http://doi.org/10.1155/2013/540646>.
- F mahrukh.B shahnaz.Experience of emergency peripartum hysterectomies at tertiary care hospitals in Quetta Pakistan. <http://doi.org/10.5402/2011/854202>
- Shamima MN, Zereen R, Zahan N, Khatun MR, Akter N, Hossain MA. Management and Outcome of Postoperative Complications among the Patients Undergoing Common Obstetric and Gynaecological Surgery outside the RMCH. *TAJ: Journal of Teachers Association*. 2017;30(2):7-12.
- J afarey SN. Maternal mortality in Pakistan compilation of available data. *JPMA* 2002;52(12):539-44.
- Semel ME,Lipsitz SR and others.Rates and pattern of death after surgery in united state 1996-2006. *Surgery*;151(2):171-82.
- Högberg U. Maternal deaths related to cesarean section in Sweden, 1951–1980. *Acta obstetricia et gynecologica Scandinavica*. 1989 Jan;68(4):351-7.
- Philipn. baker. *Obstetric by ten teacher*.18th Ed. London; Arnold 2006:20-33
- Laura J Vincent, Charlotti J Frise. Management of critical ill obstetric patients. *Obstetric. OGRC* August 2018 ; 28(8):243-252
- Teesta D, Andrew D. Identification prevention and management of post-partum hemorrhage. *OGRC* August 2020; 30(8):241-51.
- Mustafa R, Hashmi H. Near-miss obstetrical events and maternal deaths. *JCPS Pak* 2009; 19(12):781–5.
- Gani N, Ali TS. Prevalence and factors associated with maternal postpartum hemorrhage in Khyber Agency Pakistan. *JAMC* 2013;25(1-2):81-5
- Pakistan demographic and health survey 2017-2018.Measure DHS: demographic and health surveys. National institute of population study.
- AH Jokio, RM Rizvi, J Rizvi. Prevalence f obstetric fistula: a population based study in rural Pakistan. *BJOG* 2014;121(8):1039-1046.
- Symmonds RE. Incontinence: vesical and urethral fistulas. *Clinical Obstetrics and Gynecology*. 1984 Jun 1;27(2):499-514.