

Reaching the unreached: Mobile surgical camps in a remote village of Himachal Pradesh

Sonal Bathla, George Verghese, Vinod Kalla¹, T. C. Sharma², Subrat Dam¹, Nirmala Agarwal, Sweta Balani, Priti Arora Dhamija, Deepa Agarwal, Praveen Kumar

Departments of Obstetrics and Gynecology, ¹Anesthesiology and ²Urology, Sant Parmanand Hospital, New Delhi, India

ABSTRACT

Aims: The aim was to study the epidemiological factors responsible for pelvic organ prolapse (POP) in poor women of the remote village Shillai, do their POP quantification staging, to study the variety of surgeries conducted in mobile surgical camps in this area.

Materials and Methods: Retrospective analysis of surgeries conducted in five mobile surgical camps in Shillai, Himachal Pradesh from 2009 to 2013, under "Project Prolapse".

Results: A total number of surgeries conducted in five camps from 2009 to 2013 were 490 including 192 gynecological surgeries. Eighty-two percent of gynecological surgery was conducted for POP. Poor nutritional status (mean weight 41.1 kg), multiparity (mean 3.5), early marriage (mean age 18.2 years), unassisted home deliveries (100%), premature bearing down (23.8%), early postpartum resumption of strenuous activity (54.7%) and smoking (33%) contribute to the high incidence of POP. Anterior compartment prolapse was seen in 99% of patients undergoing surgery while posterior compartment prolapse was seen in 4% of patients. Vaginal hysterectomy with anterior repair with culdoplasty was the most common procedure performed (73.4%), and vault suspension was done in 3.6% subjects. The complication rate was negligible.

Conclusion: Uterovaginal prolapse is not only socially embarrassing and disabling; its surgical treatment is complex and costly too. The free mobile surgical camps under "Project Prolapse" in Shillai, Himachal Pradesh has provided relief to old neglected, disabled women suffering from prolapse in this remote village. Parallel counseling of women and dais for safe hospital delivery and training subordinates in prolapse surgery may help in addressing the problem of POP in this area in the long run.

Key Words: Menopausal problems, multiparity, pelvic organ prolapse, uterovaginal prolapse

INTRODUCTION

Pelvic floor dysfunction is a major health issue in elderly women. The lifetime risk of elderly undergoing at least one surgery for prolapse or incontinence by age of 80 years is 11%.^[1] Pelvic organ prolapse (POP) is rampant in a remote village called Shillai, District Sirmour, Himachal Pradesh. A "Project Prolapse" was introduced by the Department of Obstetrics and Gynaecology, SantParmanand Hospital in 2009. "Mobile surgical camps" in this area were organized to address the surgical needs of these poor women. These camps have been conducted in remote, unreached villages and not in regular well-equipped hospital. The current study endeavors to look in to the epidemiology, POP quantification (POPQ) staging and surgeries in these camps.

Address for Correspondence: Dr. Sonal Bathla, 6B/7, Raj Narayan Marg, Civil Lines, New Delhi, India. E-mail: drsonalbathla11@gmail.com

Aims and objectives

1. To study the epidemiological factors responsible for prolapse in village women
2. To do POPQ staging and evaluate most common type of prolapse
3. To study the variety of surgeries conducted and their outcome.

MATERIALS AND METHODS

This is a retrospective analysis of surgeries conducted in five camps in Shillai in Himachal Pradesh from 2009 to

Access this article online

Quick Response Code:



Website:
www.jmidlifehealth.org

DOI:
10.4103/0976-7800.141215

2013. Funds for the camps were raised from Government National Rural Health Mission or Nongovernment (ONGC, Friends of Sant Parmanand Hospital) Organizations. A group of general surgeon, gynecologist, anesthetist, and ophthalmologist hires a local team of paramedical staff, cook and driver from a city nearest to the village. The block medical officer screens out patients who need surgical care. The dates of the camp are publicized far and near through banners and pamphlets. All the enrolled patients are admitted 2 days prior to the local government or private hospital and subjected to the thorough examination, preanesthetic checkup and investigations as hemoglobin, platelet count, blood urea, liver function test, urine routine, random blood sugar, HIV, HbsAg, chest X-ray, and electrocardiography. Only American Society of Anesthesiologist (ASA-1), patients are taken up for surgery preferably under regional anesthesia. The diagnosis is established and OT list is prepared. Visual inspection of the cervix and not pap smear is done because of logistic reason. The meals medication and lodging is provided free to all patients, and they are discharged on day 3 usually with discharge medication and to and fro transport fare in their hand. In last five camps, a protocol was filled for all the patients requiring surgery and analyzed. Statistical analysis was performed using correlation regression analysis.

RESULTS

Surgeries

A total of 490 surgeries conducted in five camps, out of which 192 were done for gynecological problems. Eighty-two percent of these surgeries were conducted for POP [Table 1]. The minimum and maximum age of the patients was 30 and 70 years with a mean age being 47.2 years. Mean body mass index was 17.7. Early marriage was documented in 92% patients with a mean age of marriage being 18.2 years. Their mean parity was 3.5. All women had unassisted home deliveries in the cow shed sitting in a squatting position on two bricks as told by the elderly women in the house. Documentation of premature bearing down was done in 23.80% subjects. The mean postpartum rest period was only 20 days except one patient who rested for 1 year before restarting the strenuous physical work and sexual activity. Smoking was a habit in 33.3% subjects and 54.7% women were used to carrying heavy weights of wood and grass on their backs uphill. Chronic cough and constipation was seen in 4.2% patients only. Symptomatology of all the cases is shown in Table 2. The duration of prolapse was ranging from 1 to 50 years. Most of the patients developed symptoms after the first child birth only. On examination of patients presenting with prolapse following observation were made. Type of prolapse on clinical examination is shown in Table 3. Staging of the cases was done on standard POPQ system as shown in Table 4. Statistical

analysis was done using correlation regression analysis as shown in Table 5. Types of surgeries done are shown in Table 6. The most common type of surgery done was vaginal hysterectomy with anterior repair with culdoplasty. Manchester repair was done in one patient, 3.6% patients were subjected to vault suspension with sacrospinous fixation and 7.56% patients with posthysterectomy cystocele were managed by cystocele repair with mesh. One patient had intra-operatively diagnosed bladder injury, which was repaired and seven patients had significant intra-operative and postoperative complication as shown

Table 1: Type of surgeries

Type of surgeries	Number of cases
Total number of surgeries	490
Gynecological	192
General surgery	107
Ophthalmological surgery	191

Table 2: Symptomatology

Symptom	Percentage
Prolapse	82
Menstrual disorder	11.9
Abdominal pain	4.7
Others	1.4

Table 3: Type of prolapse on clinical examination

Type of prolapse	Percentage
UV prolapse	78.12
Vault prolapse	3.6
Cystocele	18.3

UV: Uterovaginal

Table 4: POPQ staging

Type of prolapse	Grading	Percentage
Anterior compartment	+6	78.12
	+4 to +5	21.88
Posterior compartment	+6	9.3
	-3 to -5	90.62
Apical prolapse	—	9.3

POPQ: Pelvic organ prolapse quantification

Table 5: Statistical correlation (correlation regression analysis)

Variable 1	Variable 2	Correlation	Sign	Statistical significance
POPQ	Parity	+0.07	Positive	Insignificant
POPQ	Resumption of activity	+0.06	Positive	Insignificant
POPQ	Weight	-0.12	Negative	Insignificant

POPQ: Pelvic organ prolapse quantification

in Table 7. All these patients were managed in the camp setting only since all of them were ASA-1 and thin built.

DISCUSSION

The All India Poverty ratio declined from 37.2% in 2004-2005 to 29.8% in 2009-2010, but still in rural areas about 33.8% population is designated below the poverty line. They are still grappling with acquiring the basic amenities. Imagine the plight of a woman living in that area. She is malnourished often not sent to school, eats her brothers left over, is married off early, has frequent unattended child births with limited access to health facilities. She is shy to share her uro-gynecological problems. Once her productive years are over she is typical elderly recluse in the family with no one to give her an ear and not spare penny to spend on her.

These are the women who are targeted in mobile surgical camps under "Project Prolapse". Reducing maternal morbidity, which causes untold suffering to millions of women, is not accorded comparable priority. For every maternal death, an estimated 6-15 women face debilitating morbidity,^[2] which goes higher in remote villages of India. A woman who has never moved out of her village in her lifetime, shall die quietly with her disease in her village only. Hence, organization of such camps to reach the unreached is the moral duty of each doctor and government or nongovernment organizations involved in social responsibility programs.

Early marriage, multiparty, malnutrition, unattended deliveries, carrying heavy weights on their backs with

Table 6: Type of surgeries

Type of Surgery	Percentage
VH with anterior repair with culdoplasty	73.4
Manchester repair	0.01
Anterior colporrhaphy with mesh posthysterectomy	7.56
Vault suspension - sacrospinous fixation	3.6
NDVH	4.1
TAH	10.9
Cervical biopsy	0.01

TAH: Total abdominal hysterectomy, NDVH: Normalized dose-volume histogram, VH: Volume histogram

Table 7: Complications

Complication	Number of cases
Intraoperative bladder injury	1
Vault prolapse	3
Hemorrhage not requiring blood transfusion	1
Lost gauze requiring laparotomy	1
Re laparotomy for primary hemorrhage	1
Wound infection	1

a full bladder is probably responsible for the anterior compartment prolapse in these women confirming similar results from other studies too.^[3-5] Furthermore, tobacco smoking is an independent risk factor for POP. Smoking-induced activation of vaginal macrophage elastase had been suggested in the pathogenesis of prolapse in women who smoke.^[6] On statistical analysis a positive correlation was found between degree of prolapse and parity/early resumption of postpartum work, which means carrying heavy weight on back uphill, but the R^2 was low suggesting need for more number of observations. The community health providers and female health volunteers must propagate against early marriage, encourage family planning practices, and promote nutritious diet, antenatal care, and delivery by skilled birth attendants. They should teach Kegel's exercises and should be able to detect early presentations of prolapse and manage them with nonsurgical interventions before surgery is mandatory. The midwives should be trained for correct conduct of labor using pelvic infant models or projectors and should be trained to teach postpartum exercises. Women should be counseled to avoid strenuous physical work is postpartum period.

In patients of prolapse with completed family, vaginal hysterectomy is the patient evaluated efficient 1 time treatment.^[7] About 73.4% patients in our study underwent vaginal hysterectomy with anterior repair with culdoplasty. Manchester repair in 0.01%, non descent vaginal hysterectomy in 4.1% and total abdominal hysterectomy in 10.9% and cervical biopsy 0.01%. Histopathology of the entire postoperative specimen was showing benign lesion except one patient who had cancer cervix on cervical biopsy and was referred for radiotherapy. A recurrence of vault prolapse is seen in 0.2-12.8% subjects as per literature^[8] and that observed in our study was 3.6% who were managed by vault suspension or anterior colporrhaphy with mesh in patients with cystocele.

All the surgeries were conducted by senior specialists, so the complications were negligible 2.5%. One intra-operative bladder injury and two cases of hemorrhage were managed efficiently by early detection. Mounted gauze used to push bowel away was lost in one patient who required laparotomy and one diabetic patient had posthysterectomy wound infection. Complication rate in hysterectomies in camps as reported in literature is 15.1%.^[9]

The duration of suffering from prolapse both vaginal and rectal was as long as 50 years in one patient [Figure 1] which suggests dearth of surgical facilities in our remote villages. One mentally disturbed socially neglected widow with huge prolapse and impacted big urethral stone was a shame on humanity [Figure 2]. The improved quality of



Figure 1: Chronic vaginal and rectal prolapse



Figure 2: Huge prolapse with impacted urethral stone

life of these women postsurgery encourages the team to conducted many more such camps. In each camp, parallel counseling of women and dais for prevention of prolapse and training of postgraduate gynecologists for prolapse surgery is thought to go in long run to do away with rampant prolapse in this area.

CONCLUSION

In remote village of Himachal Pradesh poor nutrition, multiparty, unattended births, heavy workload, and smoking were believed to be the contributing factors toward high incidence of prolapse. Anterior compartment prolapse was the most common as per POPQ staging and was thought to be secondary to uphill tasks with heavy weights on back with full bladder. Vaginal hysterectomy with repair and culdoplasty was an effective 1 time treatment for these women. Free surgical camps targeting an unreached population of women with rampant POP are a helpful intervention to improve overall health and quality-of-life of these women.

Let their suffering not end with the sunset of their lives, Let us be of some help to others before the sunset of our lives...

Step forward for rural services today.

REFERENCES

1. Tiny A, Alfredo L, Kirsten B. The effectiveness of surgical correction of uterine prolapse: Cervical amputation with

uterosacral ligament plication versus vaginal hysterectomy with high uterosacral ligament plication, versus vaginal hysterectomy with high uterosacral ligament plication. *Int Urogynaecol J Pelvic Floor Dysfunct* 2009;20:1313-9.

2. Messerschmidt L. Uterine prolapse in Nepal: The Rural health development project response. *J Nepal Public Health Assoc* 2009;4:32-42.
3. Bodner-Adler B, Shrivastava C, Bodner K. Risk factors for uterine prolapse in Nepal. *Int Urogynecol J Pelvic Floor Dysfunct* 2007;18:1343-6.
4. Family Health Division, SAIPAL & WHO Perception Experience and Health Outcome of the Women Who had Undergone Uterine Prolapse Surgery from Doti District of Nepal, Kathmandu. Family Health Division, South Asian Institute of Policy Analysis and Leadership (SAIPAL) & WHO Country Office Nepal; 2011.
5. Earth B, Sthapit S. Uterine prolapse in rural Nepal: Gender & human rights implication; A mandate for development of culture. *Health Sex* 2002;4:281-96.
6. Wieslander CK, Word RA, Schaffer JI, McIntire DD, Woodman P, O'Boyle A, *et al.* Smoking is a risk factor for pelvic organ prolapse. *J Pelvic Med Surg* 2005;11:S16-7.
7. Pakbaz M, Mogren I, Löfgren M. Outcomes of vaginal hysterectomy for uterovaginal prolapse: A population-based, retrospective, cross-sectional study of patient perceptions of results including sexual activity, urinary symptoms, and provided care. *BMC Womens Health* 2009;9:9.
8. Barrington JW, Edwards G. Posthysterectomy vault prolapse. *Int Urogynecol J Pelvic Floor Dysfunct* 2000;11:241-5.
9. Chhetry DB, Upreti SR, Dangal G, Subedi PK, Khanal MN. Impact evaluation of uterine prolapse surgery in Nepalese women. *J Nepal Health Res Counc* 2012;10:167-71.

How to cite this article: Bathla S, Verghese G, Kalla V, Sharma TC, Dam S, Agarwal N, *et al.* Reaching the unreached: Mobile surgical camps in a remote village of Himachal Pradesh. *J Mid-life Health* 2014;5:139-42.

Source of Support: Nil, **Conflict of Interest:** None declared.