Original Article

Reproductive Parameters in Upper Mustang: A Camp Based Pilot Study

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Abstract

Introduction: Published medical information on Upper Mustang is very scarce as no specific studies have been done due to its remoteness. This was the first multidisciplinary medical health camp, done to benefit the people of Upper Mustang who have limited access to health services and also to get some basic information on reproductive parameters of woman living there.

Methods: This was a camp based prospective study done between 3-8th October 2015, in Upper Mustang among women who attended the camps for various obstetrical and gynecological problems. A fixed questionnaire was utilized after taking proper verbal consent from patients. Results were analyzed and expressed in mean and averages.

Results: Out of total 614 patients, 180 woman who attended the Obs & Gyne clinic were studied. All 7 villages of Upper Mustang were represented. Most woman ie 36% were with parity 2-4 and 72% of the woman were illiterate. Mean age of the woman was 36.8yrs with maximum between 31-40 yrs age group. Contraceptive related problems was the most common presenting problem followed by pervaginal discharge. Depo contraceptive was the most common contraceptive, used by 50% of the population. About 83 (46.1%) woman experienced death of an infant or child under 5.

Conclusion: Illiteracy was high among the woman who attended the Gyne & Obs clinic. Infant mortality was found in almost 50% of the mothers with most not knowing specific cause. Depo injection was the most common contraceptive used by the woman.

Key words: Reproductive; Parameters; Upper Mustang

Introduction

Mustang is a district lying in the Western Zone that appears like a small thumb sticking out of Nepal on its northern border. This is a place that is uniquely different from the usual picture we have of Nepal. The district has a very unique cultural heritage leading to Amepal the first King of Mustang dating back to the 17th century, presence of a living King who is still revered by the people, a landscape that is like no other place in Nepal and a culturally alive social and buddhist culture pristine in its natural environment. With development as roads are built and more vehicles ply its dangerous routes change is coming.

At this juncture of transformation we were able to conduct a health camp in Upper Mustang, something which had never been done before. This was the first ever multidisciplinary medical camp ever done in Upper Mustang. The aim of the study was to get a base information of reproductive parameters of woman in Upper Mustang and assess problems faced by woman so that measures could be instituted to reduce further reproductive morbidity and mortality. This study would also help in providing basic information of womans problems and act as a base for further larger research.

Methodology

Medical camp was done between 3-8th October 2015, at 3 villages (Samar, Tsarang, Lomanthang) strategically chosen to cover all the 7 VDCs of Upper Mustang, Permission from local district authorities and the village development commities were taken for the camp. Apart

from general check, gynecological examination, ECG, EEG and USG were also done using solar energy and free medication was distributed. Highest altitude where camp was held was in Lomanthang at 3840metres. A prefixed questionnaire was used to fill in all necessary data. Local interpreters were provided for the foreign doctors while local dialect was used by the Nepali doctor. Verbal consent was taken from all woman before getting information from the study. All patients were provided free examination and treatment. All data was tabulated and analyzed and results expressed in means and averages.

Results

There were a total of 614 patients who were examined in the 3 day health camp, of which 205(33.4%) were males and 409(66.6%) were females. Of the total, 339 patients consulted for medical related problems, 159 cases with eye complaints, 104 with ear,nose and throat complaints and 180 came with gynecological and obstetrics related problems in whom a prefixed questionnaire was filled. Table 1 represents the distribution of patients coming from every village of Upper Mustang.

Table: 1 Representation from all the 7 VDC's of Upper Mustang

Village	Total no of patients (n=614)	Patient with obs & gyne related complaints (n=180)
Chuksang	34 (5.5%)	12 (6.6%)
Ghemi	71 (11.6%)	23 (12.7%)
Tsarang	183 (29.8%)	59 (32.7%)
Lomanthang	126(20.5%)	48 (26.7%)
Surkhang	75 (12.2%)	19 (10.6%)
Chonup	58 (9.4%)	5 (2.8%)
Choser	44 (7.2%)	10 (5.6%)
Others (out of district)	22 (3.6%)	4 (2.2%)
Kagbeni (lower Mustang)	1(0.2%)	-

Age of the patients ranged from 11- 75 years with mean age being 38.6 years. Table 2 shows the age distribution of the cases.

Table 2: Age group of female patients with gynecological and obstetric complaints. (n=180)

Age (years)	Obs gyne complaint cases (n=180)
<10	1
11-20	4
21-30	36
31-40	66
41-50	41
51-60	23
61-70	8
> 70	1

Of the 180 cases, 172(95.6%) of patients were Buddhist and only 8 ie 4.4% were Hindus and these were mainly woman from other districts working in Upper Mustang. The literacy rate was poor with 131 (72%) illiterate, 28(15.6%) upto class 5, 16 (8.8%) upto class 10, 3(1.7%) upto class 12, and no woman with graduate or postgraduate education status and 2 (1.1%)were buddhist nuns.

The mean age of marriage was 23.1yrs within the range of 16-38 years (Table 3) among the 157(87.2%) married woman. Unmarried woman and nuns accounted for 20 (11.6%) of the total woman. The ages given were based on recall only.

Table 3: Age at Marriage and Parity (n=180)

Age (yrs)	No (%)	Parity	No (%)
15-19	17 (10.8%)	Nullipara	10 (6.4%)
20-24	88 (56%)	P1-2	53 (33.7%)
25-29	42 (26.8%)	P3-4	57 (36.3%)
30-34	9 (5.7%)	≥5	37 (23.5%)
≥35	1 (0.6%)		

Despite high parity about 83 (46.1%) women had experienced some form of neonatal/infant and or under 5yrs mortality. Of these deaths, woman gave history of stillbirths in 19(22.9%) cases, 40 (48.2%) cases of infant deaths, 11(13.3%) cases of under 5 deaths and 9 (10.8%) with deaths of children above 5 years and 9 (10.8%) could not recal exact year of death of child. Although many woman could not recall causes of the deaths, diarrhoea, fever with cough, jaundice, prematurity related and some sudden deaths were noted as cause of deaths especially in infants. Of the 19 cases of still birth, 4 were breech deliveries at home.

Table 4: Complaints with which the patients presented (n=180)

Complaint	Remarks	No(%) N= 180
General Gyne checkup	-	45 (25%)
PV discharge	-	22 (12.2%)
Pregnancy related	Pregnancy was confirmed by portable USG in 3 doubtful cases with amenorrhoea	21 (11.6%)
Contraceptive Related	Check CuT thread, menstrual problems due to depo/norplant use	29 (16.1%)
Menstrual problems		12 (6.7%)
Medical complaints	Acid peptic disease/ hypertension/ Urinary tract infection/ arthritis/ dysentery/chest pain/ allergy/ eczema	43 (23.9%) (17/11/6/3/2/2/1/1)
Mass abdomen		1 (0.6%)
Recurrent abortion		1 (0.6%)

Contraceptive use was quite prevalent despite increased illiteracy and the remote nature of the place. Of the 180 woman, barrier method was used by 3(1.7%), Depo injection by 95(52.7%)woman, Norplant by 35(19.4%) woman, oral contraceptive pills by 24 (13.3%)woman, CuT by 17(9.4%) woman and 8 (4.4%)had undergone tubal ligation. Of the 180 woman 39 (21.7%) woman had never used any contraception. The IUCD and norplant use was due to government initiated specific method camps that were held in villages of upper Mustang and Jomsom to advocate long term contraceptive methods. Contraceptive related problems was the most common gynecological complaint ie in 29 (16.1%) cases as shown in Table No 4. Mass abdomen case was a case of splenomegaly who was refferred to Pokhara for further investigation.

Twenty eight(18.3%) of the cases were in menopause. Of these, 25 cases were able to recall age at menopause, with average of 46 years (range between 36-55years). Three woman did not know age at menopause, 2 woman had hysterectomy followed by menopause and 3 had menopause as continuation of depoamenorrhoea so could not recall exact age .

Discussion

All villages from Upper Mustang were well represented as the camp sites were strategically planned. Most of the women (77%) who attended the camp were woman over 30 years of age. This could explain the high illiteracy rate seen during this small observation. The timing of the camp was such that most of the younger generation were heading down south for business to Pokhara, Kathmandu and India.

One very significant finding was the high infant death rate as almost 50% of the woman gave history of death of an infant. This is in keeping with the high infant mortality rates of 46/1000 live births in Nepal.[1,2] Analysis of infant and under five mortality rates from 2006 NDHS showed that the ecological zone influenced the mortality rates with children living in the mountains faring much worser than hilly and terai region.[3] For eg one in six children living in the mountains died before their fifth birthday compared to one in nine children in the terai. Most of the woman did not know exact cause of infant or neonatal deaths. Few causes noted were diarrhoea, prematurity, pneumonia and jaundice. Two of the still births was due to breech delivery which could have been preventable if diagnosis had been done before hand and the woman was referred to higher centre for delivery. The general causes probably are due to lack of knowledge and lack of health facilities and poor access due to difficult terrain. The easy availability of vehicles now should help in seeking health faster. Also improving antenatal care, providing basic hygeine knowledge, knowledge about diarrhoea, infections, its recognition, treatment and early referrals could help to reduce the infant mortality rate.

Another factor which could have contributed to the infant and underfive mortality rates was the educational status of the mother (NDHS 2006). It was seen that children born to uneducated mothers experienced higher mortality than children born to educated mothers. Therefore improving educational status of woman in the district will strongly help to reduce infant and child mortality rates. The proper implementation of government initiated programmes like Community Based Newborn Care Programme and Community Based Integrated Management of Childhood Illness(CB-IMCI) to address major childhood killer diseases like Pneumonia,Diarrhoea,

Malaria, Malnutrition and Measles in Mustang would also help to reduce infant and childhood mortality in the community. Education and providing information of such services to woman and to health workers would help in dissemination of information and encourage practice of preventive measures. Local foundations like Lo Gyalpo Foundation are also working towards collaborating with the government in providing free Skilled Birth Attendant Training to health workers of our organization so that woman receive better antenatal care and delivery services.

The contraceptive usage seemed impressive with only 22% of cases having never used a contraceptive method. This trend has also been noted in the NDHS 2011 survey where uneducated woman were found to use modern contraceptive methods more commonly compared to educated woman. It was also seen that among the woman who used a contraceptive method most had used a method for few years. Depo injection was the most popular method due to its ease of usage. This is in keeping with national rates where Depo is the most newly accepted spacing method.[1]

In terms of gynecological morbidity contraceptive related menstrual problems and problems with CuT were the most common complaint followed by PV discharge. Conditions like prolapse was not seen in even a single patient during the study. This is unlike studies done in other places in Nepal like Terai and farwestern regions and in Kathmandu valley where the prevalence ranged from 14 -37%.[4-9] Early age at childbirth has been implicated as the reason for prolapse in these studies. Exact reason is not clear as woman in Mustang also give birth frequently and most work in the fields and carry heavy loads. Probability could be that woman are all nourished quite well with no woman being examined appearing malnourished and also the relatively higher age at marriage and therefore delivery ie 23.1yrs seen in this study group.

Conclusion

High illiteracy rate was seen among the woman attending the camp. Infant mortality was high with about 48% of woman experiencing such deaths. Despite illiteracy and poor access usage of contraceptive was impressive. Skilled birth attendants and implementation of integrated community based neonatal and childhood illness management will help in reducing infant and childhood mortality in the district. For this proper cooperation between government and local organizations is very essential.

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