A CASE STUDY REPORT ON

PREVALENCE OF CHOLELITHIASIS AND INVOLVEMENT OF AGE AND SEX GROUPS IN THIS DISEASE AT KATHMANDU MEDICAL COLLEGE TEACHING HOSPITAL

PREPARED IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
BACHELOR OF EDUCATION

SUBMITTED BY

SANJITA PARAJULI
ROLL NO: - 195
T.U. REGISTRATION NO. 4-1-35-27-97

SUBMITTED TO

TRIBHUVAN UNIVERSITY
SANOTHIMI EDUCATION CAMPUS, SANOTHIMI,
BHAKTAPUR, NEPAL
SHRAWAN 2058

TABLE OF CONTENTS

CONTENTS PAGE NO.

CHAPTER FIVE

LIST OF TABLES

LIST OF FIGURES

ACRONYMS

KMCTH	Kathmandu Medical College ,Teaching Hospital
M	Male
F	Female
B	Baisakh
J	Jestha
A	Ashar
S	Shrawan
B	Bhadra
A	Ashoj
K	Kartik
M	Mangsir
P	Poush
M	Magh
F	Falgun
C	Chaitra
BEP	Benign Enlargement of Prostate
CBS	Central Beauro Of Stastistics
DOH	Department Of Health
OPD	Out Patient Door
IPD	In-Patient Door
ICU	Intensive Care Unit
CCU	Critical Care Unit
NICU	Neonate Intensive Care Unit
ECG	Endo Cardio Gram
EEG	Electric Encepalopathic Gram
USG	Ultrasonogram
Gyn/obs	Gynae/Obstetrics
ENT	Ear Nose Throat
Psy.	Psychiatric
Ped.	Pediatric

1. INTRODUCTION

1.1 BACKGROUND OF THE STUDY

These days man has proved that he is a successful scientist and is very curious to solve the problem in existing conditions. Though science has become a part of our life, it has also become a hazard due its misuse. One of the major complications of new science is an emerging disease like cancer, asthma, heart diseases etc. Some diseases are developed by naturally and some are originated as consequences of human activities. Development of science has made the diseases to extend its age as well as made to born new type of diseases.

If we look back towards the past, the history of health seems better than these days. Human being then had comfortable and healthy life style. At that time the total population was lower than that of these days.

Maladjustment of human organism to the environment is considered as the disease. Many diseases seen in human are of communicable and non-communicable types. These diseases appear due to disturbance mechanism in human bodies because of hereditary, environmental pollution, imbalance diet, and different types of pathogens and other causes. Among these diseases, Cholelithiasis is one of the most common disease which is the stone formation in gall bladder i.e. Gall Stone due to metabolic disorder. It is most common disorder of the biliary tract. It is one of the very common health problems in Nepal and all over the world. Nepal is developing and poor country where the total no. of population is 23,151,423(according to the annual statistical yearbook of population CBS.2001). The no. of morbidity is increasing day by day though the public awareness has been started. According to the annual report of Department of Health Services 2058 2059 the total no. of hospital inpatient morbidity is the 147.288. And the morbidity of the cholelithiasis is 1407 in number where the male were 408 and the female were 999.

Because of the development of modern scientific technology, human being has made possible most of the diseases curable by allopathic (medical or surgical) treatment as well as other treatment practices such as Ayurvedic, Homeopathic e.t.c. These days Allopathic treatment is considered to be the most common treatment practice to provide preventive, curative and promotive health services. In the context of Nepal, these types of services are facilitated by different trained medical persons, clinics, health posts, health centers, and hospitals. In Kathmandu, which is situated in the central region of Nepal, almost all types of health services are available through government and private sector.

Kathmandu Medical College Teaching Hospital (K.M.C.T.H) is one of the recently established private Teaching Hospital located in the Sinamangal, Kathmandu which conducts the MBBS programs to meet the developmental need of the country. It also provides the OPD Services as well as IPD services including Medical, Surgical, Pediatric, Gynae/Maternity, Post operative, ICU/CCU, NICU, Cabins etc where the total

beds consists of 515 in number. Many patients enter this hospital for diagnostic and treatment purposes where individual may be attacked by different or common type of disease. It is known that many patients suffering from cholelithiasis are admitted in surgical ward of the KMCTH Surgical ward is situated on the fifth floor of the KMCTH building where total of 50 beds are kept for patients. KMCTH has managed the Cabin room for them who want to stay in privacy. In this study, surgical ward of KMCTH is selected to find out the prevalence rate of cholelithiasis and involvement of age and sex groups in this disease.

1.2 STATEMENT OF THE PROBLEM

According to the Annual Report of the Department of Health Services 2058/59 (2001/002) made by HMG of Nepal Ministry of Health, The hospital inpatient morbidity in Cholelithiasis was 1407 where the no. of male was 408 and Female was 999. It seems that the morbidity of cholelithiasis is high in female. Also the hospital inpatient morbidity in surgical cases is increasing day by day in KMCTH. So by making the main problem of prevalence rate of cholelithiasis and involvement of sex and age groups in this disease is being studied as in form of case study.

1.3 SIGNIFICANCE OF THE STUDY

The main importance of this study is as follows;

1. It would help to achieve the data of common diseases that came in surgical ward of KMCTH. These diseases are the factors responsible for increasing the morbidity rate in surgical cases.
2. It would help to know the prevalence rate of cholelithiasis.
3. It helps to study the comparison between affected sex and age groups of cholelithiasis.
4. It helps to gather information on existing knowledge and attitude of patients parties towards the cholelithiasis and make them able to choose the appropriate treatment practice for cholelithiasis.
5. It helps to gain the information about the human resources of KMCTH.
6. It helps to provide information and data on Cholelithiasis for those who are engaged in research or survey in the related topic.

1.4 OBJECTIVES OF THE STUDY

General Objectives: The general objective of the study was to find out the prevalence rate of Cholelithiasis and involvement of age and sex group in this case.

Specific objectives:

The specific objectives of the study were as follows:

1. To find out the total no. of in-patient in each ward of KMCTH including surgical cases from 2058 B.S to 2059 B.S
2. To find out the knowledge and attitude towards cholelithiasis among patient parties.
3. To find out the Human Resources in KMCTH.

1.5 FORMULATION OF THE HYPOTHESIS

To reach into the effective conclusion of study the following hypothesis were made:

1. The hospital was located in densely populated area with easily accessible, so the patient flow might be high.
2. The hospital was situated in developed city of Nepal where the no. of educated people might be more than other place. That's why the knowledge, attitude and selection of treatment might be better.
3. Among the admitted patient of cholelithiasis in surgical ward of K.M.C.T.H the most affected sex and age group might be female and adult respectively.

1.6 DELIMITATION OF THE STUDY

The study had to be conducted within the limited time. The study was done on the Cases admitted in the surgical ward of the K.M.C.T.H (058-059) which might not give the actual picture of prevalence rate. However, all efforts had been made to fulfill the objectives of the study. Due to the limitation of time, sources and materials the following limitations were determined:

1. This case study was related only to the admitted patient of Surgical ward of KMCTH in the period of two years (2058 and 2059 B.S)
2. In this study, only the prevalence rate and affected sex and age group of cholelithiasis was studied among the admitted patients in surgical ward.
3. The data were collected from the record books provided by record section of KMCTH. The information was gathered from self-designed questionnaire for this case study making it as the medium of interview to patient parties.
4. This study was completed without taking any economic help from others. Own limited resource and materials were used to find out the prevalence rate and affected sex and age group of cholelithiasis.

CHAPTER TWO

2.1 REVIEW OF THE LITERATURE

According to Charles, Christian, Mahapatra, Sen and Joshi (published in JNMA 1999:38:114 -117), the ratio of male and female involved in Cholelithiasis was found to be 1:10. Also the involved age group was 30-40 year group where 27.9 % were affected among 461 cholelithiasis cases came in Western Region Hospital, Pokhara from January 1st 1995 to December 31st 1998.

According to the annual report of Department of Health Services 2058/2059, the total no. of hospital in-patient morbidity was 1 hundred 47 thousand 2 hundred and 88. And the total morbidity of the cholelithiasis was 1 thousand 4 hundred and 7 where male and female involvements were 408 and 999 in number respectively.

In the West, where the common age group for cholelithiasis is 50-70 years and the most susceptible sex group is female.

Gall stone are composed of cholesterol, bile salts, calcium, bilrubin or proteins. However, the exact cause of gallstone formation is not clearly understood. There are three specific factors which appear to contribute to the formation of stones: metabolic disorders, biliary stasis and infection.

CHAPTER THREE

3.1 METHODOLOGY

This is a retrospective analysis of the cholelithiasis patients admitted in the surgical ward during the period of two years (2058 B.S and 2059 B.S.). Also the Descriptive Research design method was used to find out the existing knowledge and attitude towards Cholelithiasis among patient Parties.

3.1.1 SOURCES OF DATA/INFORMATION

For this study, the in-patient record book of KMCTH (to collect the total number of in-patient and suspected age and sex groups) and interview to patient parties with the help of questionnaire (to find out the existing knowledge and attitude of this case) were used as the primary source of information. Other related facts and data were collected from the secondary sources namely, Central Beaureau of Statistics (CBS), Department of Health (DOH), website and discussion with the technical and administrative staffs of KMCTH.

3.1.2 SAMPLE SELECTION PROCEDURE

As it is already mentioned that this study was done in the surgical ward of the KMCTH, to find out the prevalence and affected age and sex in cholelithiasis. So, the sample was selected from the patients of cholelithiasis admitted in the period in the years 2058 BS and 2059 BS in surgical ward of KMCTH. A sample consisting of 100 patient parties who came to the surgical ward was considered to find out the knowledge and attitude about cholelithiasis.

3.1.3 TOOLS OF RESEARCH

To get the better guide and to build the materials for this study; related magazines, website, books etc were used in the form of research tools. The main tools were questionnaire, and the record book of in-patient. Also the Surgical ward was also observed to see the Cholelithiasis patient.

3.1.4 DATA COLLECTION TECHNIQUE AND PROCEDURE

To collect the actual information as per the objectives, related staffs (technical staffs and administrative staff) were met and objectives of the study were told to them. In this way, the data were easily collected through retrospective analysis method. The sample consisted of 100 patient parties. A structured standard questionnaire was supplied to the respondents for their response. Most of them had responded immediately but who could not, were interviewed. The questionnaire included a self designed sheet to record the following socio-demographic information such as name, age, sex, religion, education, district of domicile etc.

CHAPTR FOUR

4.1 Analysis and presentation of Data

The study was done to the cases admitted in surgical ward of KMCTH of the years 2058 and 2059 B.S. Among 3054 in-patient cases of KMCTH of the year 2058 BS, total surgical in-patient cases were found to be 640. On the year 2059 BS, out of 6086 impatient cases, a total of 1059 cases were the surgical. The study especially presents the "Prevalence of Cholelithiasis and involvement of age and sex groups in this case." To fulfill the objectives, data were compiled on the basis of related topics and analyzed them, which were presented in the form of table, graph and pie chart.

PART FIRST

4.1.1 Prevalence of Cholelithiasis in 2058 and 2059 B.S

Total 1699 patient with surgical diagnosis were admitted in surgical ward in the years from Baisakh 2058 B.S to Chaitra 2059 B.S. Out of those cases 305 patients were having Cholelithiasis. Total prevalence is presented in table 1 and table 2 of the years 2058 and 2059 B.S respectively.

Table no. 1 Monthly Prevalence of Cholelithiasis in 2058

Description	No. Of Cases												
	B	J	A	S	B	A	K	M	P	M	F	C	Total
Male	2	1	1	0	3	1	2	3	5	1	1	0	20
Female	10	4	9	13	3	13	7	10	15	12	13	9	118
Total Frequency	12	5	10	13	6	14	9	13	20	13	14	9	138
Total cases in month	33	14	34	54	80	102	34	74	63	50	48	54	640
Prevalence	36.3	35.7	29.4	24.07	7.5	13.7	26.4	17.5	31.7	26	29	16.6	21.56

Table no. 1 shows the monthly prevalence of Cholelithiasis in 2058 BS. According to this table, 20 male patient and 118 females came to Surgical Ward to get indoor services. Total cases of Cholelithiasis among 640 patients were found to be 138 in this year. So the Prevalence of Cholelithiasis in the year 2058 was 21.56%. Monthly prevalence shows that the prevalence was the highest in Baisakh which was 36.3% and lowest in Bhadra which was 7.5%. It was also found that female (85.5 %) was more affected sex group than male (14.5 %).

Table no. 2 shows that the monthly prevalence of Cholelithiasis in 2059 B.S. In this year, more female (86.3%) were affected than male (13.7%) like in 2058 BS. In 2059 BS, a total of 1059 cases were brought to surgical ward where 167 patients were having Cholelithiasis. Total prevalence in 2059 was 15.76%. Monthly prevalence shows that the prevalence was the highest in Poush (25%) and the lowest in Falgun (8.95%).

Table no. 2 Monthly Prevalence of Cholelithiasis in 2059 BS.

Description	No. of Cases												
	B	J	A	S	B	A	K	M	P	M	F	C	Total
Male	5	6	0	0	1	1	2	2	3	0	1	2	23
Female	7	14	20	8	10	12	5	14	17	19	5	13	144
Total Frequency	12	20	20	8	11	13	7	16	20	19	6	15	167
Total cases in month	71	97	122	83	81	84	64	84	81	100	67	125	1059
Prevalence	16.9	20.6	16.4	9.6	13.5	15.4	10.93	19	25	19	8.95	12	15.76

Comparatively, the data shows that the patients having cholelithiasis was decreased in the year 2059 BS than in 2058 BS though the patient flow was highest in 2059 than in 2058.

PART TWO

4.1.2 Involved age and Sex groups in Cholelithiasis in the period from Baisakh 2058 BS to Chaitra 2059 BS

It is already mentioned that the total surgical in- patient cases were 640 on 2058. By the retrospective analysis of the disease pattern of surgical ward admitted in the period of two years (2058-2059), it seemed that the commonest case was the Gall stone i.e. Cholelithiasis among all in-patient cases of surgical ward. The affected age and sex group in Cholelithiasis of the years 2058 and 2059is presented in table no. 3 and table no. 4.

The table no. 3 clearly shows that among 138 patients of cholelithiasis, 20 were male and 118 were female. So, the average ratio of male and female on Cholelithiasis was 1:6 (approximately) in 2058. It was found that the female was more susceptible sex group in Cholelithiasis case in 2058. And 31-35 years age group was found more affected age group constituting the no. of 25 where 2 male and 23 female of this age groups were found to be affected.

But the age group of 15-20 years constituted only 3 female patients with no male involvement in this case. Similarly, involvement of different sex in age groups 21-25 years, 26-30 years, 36-40 yrs, 41-45 yrs, 46-50 yrs, 51-55 yrs, 56-60 yrs and 60 + yrs were found to be 1 male and 11 female, 2 male and 21 female, 1 male and 11 female. 2 male and 8 female, 3 male and 10 female, 2 male 12 female, 3 male 8 female & 4 male 11 female respectively. The highest no. of case was found in Poush (20) where the 15 female and 5 male were found. But in Jestha only 5 patients were admitted where 1 male and 4 female were found to be affected. So this analysis makes clear that the more affected sex group was female and age group was 31-35 years group in the year 2058 BS.

Table no. 3 Monthly involved age and sex groups in cholelithiasis in 2058 BS.

Description	No. of cases																				Total	
	15-20		21-25		26-30		31-35		36-40		41-45		46-50		51-55		56-60		61+			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Baisakh	0	0	0	0	0	3	0	2	0	2	0	0	2	1	0	0	0	2	0	0	2	10
Jestha	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	2	0	0	0	0	1	4
Ashar	0	0	0	1	0	2	0	1	0	1	0	0	0	0	1	1	0	1	0	2	1	9
Shrawan	0	0	0	2	0	2	0	1	0	2	0	0	0	2	0	2	0	1	0	1	0	13
Bhadra	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	2	0	1	0	3	3
Ashoj	0	1	0	2	0	1	1	3	0	1	0	1	0	1	0	0	0	1	0	2	1	13
Kartik	0	0	1	1	0	1	0	2	0	1	0	0	0	0	o	0	0	0	1	2	2	7
Mangsir	0	0	0	2	1	3	0	2	0	1	1	1	0	0	0	0	0	0	1	1	3	10
Poush	0	0	0	1	1	3	1	5	0	1	1	1	1	2	0	2	0	0	1	0	5	15
Magh	0	0	0	0	0	2	0	3	1	1	0	2	0	1	0	1	0	2	0	0	1	12
Falgun	0	0	0	0	0	3	0	2	0	0	0	2	0	1	0	3	1	1	0	1	1	13
Chaitra	0	1	0	2	0	1	0	0	0	0	0	1	0	1	0	1	0	0	0	2	0	9
Total	0	3	1	11	2	21	2	23	1	11	2	8	3	10	2	12	3	8	4	11	20	118
Grand total	3		12		23		25		12		10		13		14		11		15		138	

Table no. 4 presents the data of the affected age and sex group of the year 2059 BS among the patient of Cholelithiasis in KMCTH surgical ward. It shows that a total of 167 Cases were admitted as Cholelithiasis where 144 female and 23 male were affected with this disease. So the average ratio of male and female on cholelithiasis in 2059 was 1:6. As in the year 2058, the susceptible sex group is female in this year 2059 BS. Like in 2058 BS, there was no any male patient seen in the age group of 15-20 years in 2059 BS. But the no. of female was recorded to be 2 in this age group. The age group of 31-35 years was the most affected age groups where a total of 32 cases were admitted among 167 cholelithiasis cases.

There were 2 male and 13 female involvements in the age group of 21-15 years. But in the age group of 26-30, a total of 24 cases were seen including 3 male and 21 female. Both age groups of 36-40 years and 41-45 years constituted 17 patients each in the year 2059 BS. But male were 2 and female were 15 in the age group of 36-40. There was no male seen in the age group of 41-45 years. Fifteen cases of the age group of 46-50 years were admitted consisting 1 male and 14 female. In the age group of 51-55 years, 14 cases involving 3 male and 11 female were seen. There were 18 patients found in the age group of 56-60 years where male were 4 and female were 14. Only 13 patients were admitted of the age group of 60 years onward.

In the year 2059 BS, the case no. of cholelithiasis was equal in the month of Jestha, Ashar and Poush where the total no. of cases was 20, which was more than other months. In the month of Ashar and Magh of 2059 BS, no male involvement was seen. The table shows that female was more affected sex group and more affected age group was 31-35 years group.

Table no. 4 Monthly involved age and sex groups in Cholelithiasis in 2059 BS

Description	No. of cases																				Total	
	15-20		21-25		26-30		31-35		36-40		41-45		46-50		51-55		56-60		61+			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Baisakh	0	0	1	1	1	0	0	2	1	1	0	1	0	1	0	0	1	0	1	1	5	7
Jestha	0	1	0	3	0	2	1	2	0	0	0	1	1	3	2	0	1	1	1	1	6	14
Ashar	0	1	0	1	0	1	0	5	0	1	0	2	0	4	0	2	0	3	0	0	0	20
Shrawan	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	3	0	2	0	1	0	8
Bhadra	0	0	0	0	1	1	0	3	0	1	0	1	0	1	0	0	0	2	0	1	1	10
Ashoj	0	0	0	1	0	3	0	1	0	1	0	4	0	0	1	0	0	1	0	1	1	12
Kartik	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	1	1	1	1	0	2	5
Mangsir	0	0	0	1	0	4	1	2	0	1	0	1	0	2	0	2	1	1	0	0	2	14
Poush	0	0	0	2	1	4	2	2	0	1	0	1	0	1	0	2	0	2	0	2	3	17
Magh	0	0	0	1	0	3	0	5	0	5	0	2	0	1	0	0	0	1	0	1	0	19
Falgun	0	0	1	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	1	5
Chaitra	0	0	0	0	0	2	1	3	1	1	0	4	0	1	0	1	0	0	0	1	2	13
Total	0	2	2	13	3	21	5	27	2	15	0	17	1	14	3	11	4	14	3	10	23	144
Grand total	2		15		24		32		17		17		15		14		18		13		167	

PART THREE

4.1.3 Total In-patient number of KMCTH in the period of 2058 BS and 2059 BS

KMCTH not only provides the facilities for clinical studies for MBBS program, also offers all preventive, curative and promotive health services through OPD, IPD, Outreach clinic, Camp service etc. Currently, the facilities provided in the hospital include the Outdoor and Indoor Clinical services in General medicine, Surgery, Pediatrics, Maternity/Obstetrics, Psychiatric, ENT, Dental, Orthopedics, and Eye by the concerned specialists. The data of IPD shows that the total of 3054 and 6086 case no. were admitted in 2058 B.S and 2059 B.S respectively in KMCTH. Total in-patient no. of KMCTH in 2058 B.S and 2059 B.S is presented in table no.5 and table no.6 respectively.

The table no. 5 shows that the patient flow was the most in medicine ward among all wards. Out of 3054 patients admitted in whole KMCTH wards, 27.83% patients admitted in Medicine ward. This table makes clear that the total mentally disorder patient in the year 2058 BS was 26.3%. Similarly, Surgical cases were 21.0%, Gynae/obs. Cases were 12.9% and eye cases were 0.16% in this year. The flow of child patient into Pediatric ward was 5.2% where in Orthopedic ward flow of case was found to be 4.0%. In the ENT ward 2.6% cases were admitted. So it is identified that the case no. was highest in medicine ward and lowest in Eye ward in 2058. The study of this table shows that the patient flow was increased in the month of Chaitra, in which total of 327 cases were admitted among the whole impatient cases and the patient flow was decreased on the month of Jestha.

Table 5 In-patient breakdown in 2058 B.S of KMCTH

Month	Medical	Surgery	Gyn/obs	Ped.	Ortho	Eye	ENT	Psy	Total
Baisakh	54	33	-	13	4	-	2	62	135
Jestha	51	14	12	8	4	-	7	16	112
Ashad	33	34	14	15	10	-	9	82	197
Shrawan	72	54	31	17	12	-	5	98	289
Bhadra	84	80	18	13	14	5	2	81	297
Aswin	78	102	28	15	10	-	6	76	315
Kartik	70	34	17	12	13	-	6	51	203
Mangsir	88	74	36	10	11	-	7	52	278
Poush	69	63	46	9	6	-	11	64	268
Magh	84	50	62	15	19	-	8	65	303
Falgun	87	48	56	19	7	0	3	77	297
Chait	80	54	77	14	11	0	14	77	327
Grand Total	**850**	**640**	**397**	**160**	**121**	**5**	**80**	**801**	**3054**
%	27.83%	21.0%	13.0%	5.2%	4.0%	0.16%	2.6%	26.3%	100%

Table no. 6 In-patient Breakdowns in 2059 of KMCTH

Month	Medicine	Surgery	Gyn/Obs	Ped.	Ortho	Eye	ENT	Psy.	Total
Baisakh	122	71	64	79	19	0	13	11	379
Jestha	223	97	56	131	11	0	28	12	558
	153	122	79	116	18	19	21	13	541
Shrawan	197	83	84	146	17	0	12	24	563
Bhadra	145	81	75	128	13	0	19	13	474
Aswin	234	84	84	104	26	0	17	8	557
Kartik	121	64	79	104	19	0	13	29	429
Mangsir	117	84	122	141	27	3	26	24	544
Poush	146	81	92	114	23	0	11	16	483
Magh	128	100	109	110	21	0	13	18	499
Falgun	158	67	103	118	25	0	13	12	496
Chaitra	147	125	124	120	11	0	19	17(Dental2)	563
Grand Total	**1891**	**1059**	**1071**	**1411**	**230**	**22**	**205**	**197**	**6086**
%	**31.07%**	**17.4%**	**17.6%**	**23.18%**	**3.77%**	**0.36%**	**3.36%**	**3.23%**	**100%**

The table no. 6 shows that in 2059 B.S, the patient flow was highest in medicine ward than in others like in 2058 B.S. The impatient record shows that among whole cases, 31.07% were medical cases. The Psychiatric in-patient cases were decreased in 2059, but the rate of pediatric cases was increased more than in 2058, where the table shows 23.18% are pediatric cases. Also the patient flow was highest in Shrawan and Chaitra i.e. 563 among 6086 IPD cases. The patient flow was decreased in the month of Baisakh.

By comparing the table no.5 and 6, it was found that the whole in-patient cases were higher in 2059 than in 2058.

PART FOUR

4.1.4 Common Surgical Cases 0n 2058 and 2059 B.S.

Total 640 cases were admitted in surgical ward in 2058 B.S. and total 1059 cases were admitted in 2059 B.S. Among them Appendicitis, Hernia, Renal stone, Gall stone, Hemorrhoids, Hydrocele and BEP were seen as common surgical cases. So except these cases, other cases with different diagnosis were kept together and named them as miscellaneous (misc.). So the miscellaneous case no. is 341 which comprised of 53.2% among total admitted patient in surgical ward. In 2058 and in 2059 the miscellaneous cases were 549 (52%). Common cases admitted in surgical ward in 2058 and 2059 are showed in table no. 7 and table no 8 respectively.

Table no. 7 Common Inpatient Surgical Cases in 2058 B.S

S.No.	Cases	Male no.	Female no.	Total no.	%
1	Appendicitis	33	17	50	7.9
2	Hernia	39	6	45	7
3	Renal stone	18	19	37	6
4	Gall stone	20	118	138	21.5
5	Hemorrhoids	13	1	14	2.1
6	Hydrocele	3	0	3	0.4
7	BEP	12	0	12	1.9
8	Misc.	192	149	341	53.2
Grand Total		330	310	640	100%

Table no. 8 Common Inpatient Surgical cases in 2059 B.S

S. no.	Cases	Male no.	Female no.	Total no.	%
1	Appendicitis	74	63	137	13
2	Hernia	60	7	67	6.3
3	Renal stone	38	36	74	7
4	Gall stone	23	149	172	16.2
5	Hemorrhoids	18	5	23	2.1
6	Hydrocele	12	0	12	1.1
7	BEP	25	0	25	2.3
8	Misc.	326	223	549	52
Grand total		576	483	1059	100%

It was found that the most common in-patient case of surgical ward was Gall stone in both the years 2058 and 2059 B.S. Among 640 cases admitted in surgical ward, a total of

138 cases were diagnosed with Cholelithiasis (with or without acute Cholecystitis) which comprised 21.5%. Among them 20 were male and 118 were female. In Comparison the both tables 7 and 8, it shows that in 2059 Gall stone cases were slightly more than 2058 which was 172 among 1059 cases (16.2%). But the ratio of cholelithiasis to the total surgical in-patient cases in 2058 BS was slightly more than 2059 B.S. Also the female had this disease more than male.

There was the case of the appendicitis where male were 33 and female were 17, in total 50 were appendicitis cases which was 7.9% among total of 670 surgical cases admitted in surgical ward in 2058. But the no. increased in 2059 where 74 male and 63 female with sum total of 137 cases (13%) were admitted among 1059 cases in surgical ward. The data shows the no. of appendicitis patient was increased on the study period of 2059. But in both years the more affected sex group was male than female.

It was also found that 45(7%) cases were admitted with Hernia to get the surgical treatment in 2058 where male were more affected. Among those 39 male and 6 Female were affected. But in 2059 the cases were more, where 60 male and 7 female made sum total of 67 (6.3%) had the problem of Hernia among 1059 surgical in-patient cases.
At the time of study different types of hernia like incisional type hernia, direct inguinal hernia and indirect inguinal hernia were found. But in this analysis all types of admitted hernia is counted together.

Renal stone (including Ureteric stone, Pyelonephritis, Nephrolithiasis) cases were seen in both years of the study period. In 2058 BS, 18 male and 19 female (total of 37 i.e. 6%), were admitted in surgical ward. In 2059 BS, 38 male and 36 female had admitted with the problem of renal stone .So the total Renal stone case no. was 74 (7%) among 1059 in-patient surgical cases.

Benign Enlargement of Prostrate (BEP) and Hydrocele cases were seen only in male because this is the disorder of male sex glands. According to the table no. 7, it shows that 12 (1.9%) patients had BEP and 3 (0.2%) had Hydrocele among the total patients of surgical ward in 2058. But in 2059 BS, a total of 25 (2.3%) were affected with BEP and 12 (1.1%) had Hydrocele according to the table no. 8.

Hemorrhoids was found in both male and female where 13 male and only one female were admitted for the surgical treatment. So, among the total cases in 2058, a total of 14 (2.1%) Hemorrhoids were admitted. In 2059 BS, the total inpatient of Hemorrhoids were 23 (2.1%) among the total surgical inpatient surgical cases.

This study makes clear that the male were affected more than the female.

PART FIVE

4.1.5 Knowledge about Cholelithiasis among patient parties

The objectives of this study were to find out the knowledge and attitude towards cholelithiasis among patient parties. So, to get the existing knowledge and attitude of the patient parties, interview (structured) was taken to the relatives of the patients who had come to the surgical ward of KMCTH. Only 100 patient parties were interviewed. Among them 17% were illetrate and 83% were found literate. The patient parties were asked about the knowledge about meaning of cholelithiasis, predisposing factor of Cholelithiasis; either it is communicable or non- communicable disease, painful region in Cholelithiasis and best treatment choice for cholelithiasis.

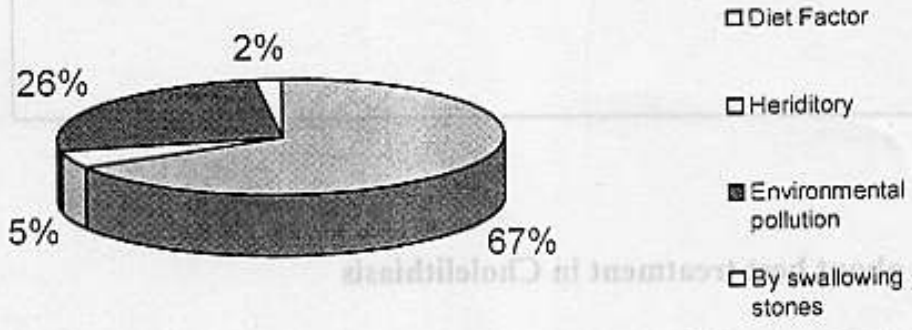
A. Knowledge about meaning of Cholelithiasis

According to this study, among 100 patient parties all agreed for true meaning of the Cholelithiasis i.e. Stone in the gall bladder.

B. Knowledge about the most common predisposing factor of Cholelithiasis

To get actual knowledge of patient parties, they were asked about the predisposing factors of cholelithiasis. Among them, 67% considered diet as the main factor, 5% supported the hereditary factor, 26% agreed the cause as environmental pollution. Till then remaining 2% thought that Cholelithiasis was caused by swallowing the stone. These 2 percent were illiterate. Fig 1 shows the knowledge about the predisposing factor of Cholelithiasis among patient parties.

Fig. 1 Knowledge about the predisposing factor of Cholelithiasis among patient parties.



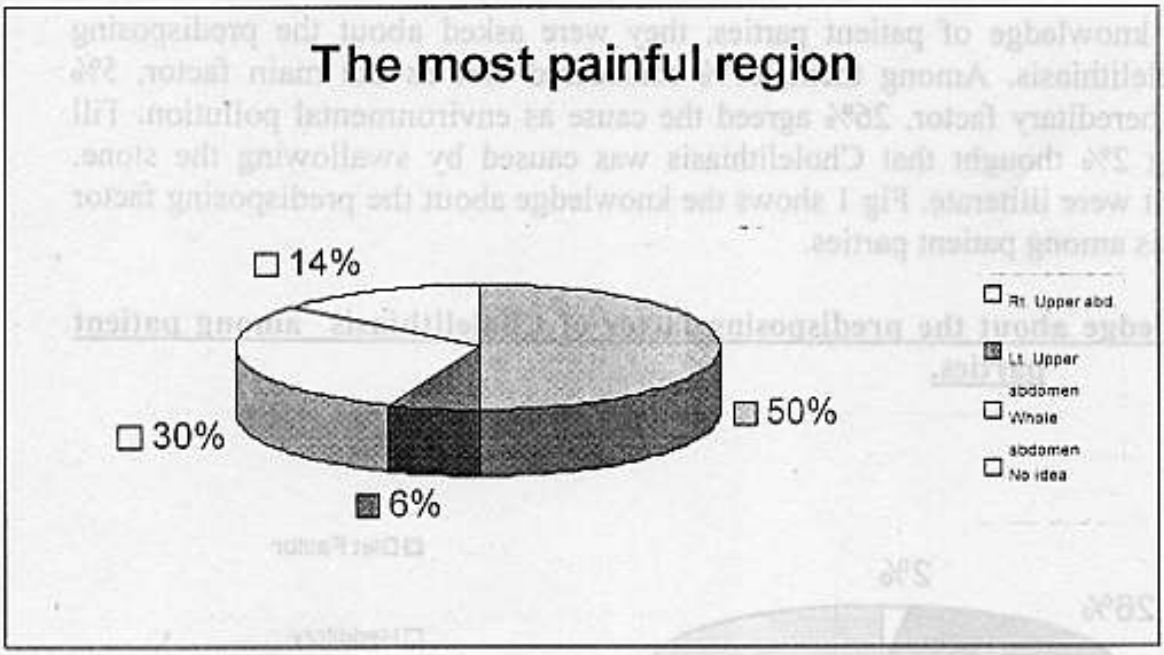
C. Knowledge about either cholelithiasis is communicable disease or non-communicable disease

Among the interviewed patient parties, only 1% told that cholelithiasis was communicable disease but 99% had the concept that it was non- communicable disease.

D. Knowledge about most painful region in Cholelithiasis

Fifty percent patient parties told that the most painful region was the Right Upper abdomen. Other 30% told the left upper abdomen, 14% shared that whole abdomen was most painful region and remaining 6% expressed that they had no idea about most painful region. Fig. 2 shows the percentage of patient parties having knowledge about the most painful region in cholelithiasis.

Fig. No. 2 Knowledge about the most painful region in Cholelithiasis.



E. Knowledge about best treatment in Cholelithiasis

The surgical ward is that ward where the patients are admitted for the surgical treatment purpose. All the patient parties (who brought their patient for surgical treatment of cholelithiasis) believed that the best treatment for Cholelithiasis was the surgical treatment. It can be predicted from the study that the interviewed patient parties had got good knowledge about the treatment methods of cholelithiasis. Cent percent patient parties wanted to get remedy of the disease by surgical treatment.

4.1.6 Attitude towards cholelithiasis among patient parties.

A. Individual view for better treatment place for cholelithiasis patient

Though 13% were illiterate, they do not want to take the patient of cholelithiasis to the Dhami/Jhakri and the Homeopathic centers. Among 100 Patient parties, 3% still believe the best treatment place is Ayurvedic treatment centers and the rest 97% had the opinion that the best treatment place is Allopathic centers.

Table no. 9 Individual view for better treatment place for Cholelithiasis patient.

S.No.	Place for treatment	Total no.	%
1	Hospital or health centers(Allopathic)	97	97
2	Ayurvedic Treatment	3	3
3	Dhami/Jhakri(Traditional)	0	0
4	Homeopathic Treatment	0	0
	Grand Total	100	100%

B. Preferred treatment by Cholelithiasis patient

Among 100 cholelithiasis patients, nobody was interested to the Traditional methods of treatment of Cholelithiasis, 2% preferred the Ayurvedic treatment. other 2% preferred to take plenty of fluid due to the fear of surgery. And remaining 96% preferred surgical treatment. Table 9 shows the preference of treatment type for cholelithiasis among 100 cholelithiasis patients.

Table 10 Preferred treatment by cholelithiasis patient

S.No.	Types of treatment	Total no.	%
1	Taking plenty of fluid	2	2
2	Traditional treatment (Dhami/Jhakri)	0	0
3	Ayurvedic treatment	2	2
4	surgical treatment(allopathic)	96	96%
	Grand Total	100	!00%

C. Diet for Cholelithiasis patients:

During the time of the study, it was found that 65% patient parties among 100 had the acceptance to boiled diet for Cholelithiasis patients, 15% had the attitude toward normal diet and 20% thought to give low spicy and low fat diet.

Table no. 11 Attitude towards Diet for cholelithiasis patients among patient parties

S.No.	Type of Diet	Total no.	%
1	Boiled type diet	65	65
2	Normal Diet	15	15
3	Low spicy and fat diet	20	20
4	High spicy and fat diet	0	0
	Grand total	100	100%

PART SEVEN

4.1.7 Human Resources in KMCTH

The hospital, now called Kathmandu Medical College, was earlier known as Jorpati Community Hospital which was situated at Jorpati. The academic building for MBBS program of KMCTH is situated at Duwakot, Bhaktapur. And this private Teaching Hospital is located in its own building with six storied at Sinamangal in the Kathmandu city. The hospital has at present 515 bed including Cabins, ICU, and NICU. In addition to inpatient services, this hospital provides OPD services, 24 hour emergency services, 24 hour pathological laboratory services, 24 hour X-Ray facility, minor and major operating services including laparoscopy and diagnostic services like Endoscope, Bronchoscope, ECG, EEG,USG etc.

To achieve the goal of any organization, it needs sufficient equipment facilities, modern technology as well as sufficient skilled human resources. KMCTH has also its own skilled manpower on the basis of qualification, level and job description. To supply qualitative Human Doctor as well as to provide the better human health services, it has employed a lot of human resources and has mobilized them to achieve the goal of this hospital. It has categorized the human resources as follows:

1. Faculty
2. Clinical
3. Nursing
4. Technician
5. Administrative

The following table shows the total no. of manpower in KMCTH at the end of Ashad 2059.

Faculty, Clinical, Nursing, Technical and Administrative staff

Faculty:

KMCTH has hired efficient and experienced faculty experts from Nepal and India. Table 12 shows the manpower in the faculty Department at the end of Ashad 2059. Among 74

staffs in this department, 30 Professor, 8 Associate Professor, 5 Assistant Professor and 31 Lecturer are contributing to the faculty. By the help of these highly qualified, experienced and committed staffs KMCTH is now able to conduct the MBBS program very well.

Table 12 No. of staffs in Faculty Department at the end of Ashad, 2059.

S.No.	Position	Number
1	Professor	30
2	Associate Professor	8
3	Assistant Professor	5
4	Lecturer	31
	Total	74

Clinical:

Table 13 shows the no. of staffs in Clinical Department who helps to save the patients life .There were altogether 65 staffs in clinical Department. Among them 5 were Consultant/Registrar, 6 were Demonstrator, 10 were Senior House officer and 44 were the House Officers.

Table 13 Human Resources in Clinical Department at the end of Ashad of 2059 BS

Sr. no.	Position	NO.
1	Consultant/Registrar	5
2	Demonstrator	6
3	Senior House Officer	10
4	House Officer	44
	Total	65

Nursing Department

Table 13 shows the no. of staffs in the nursing department. It is impossible to run the IPD of each hospital without the nurses because they provide the health services on the basis of caring to the patients and they are the bridge of patients and doctors. So to run the KMCTH in better way there were 86 nursing staffs working in the Nursing Department at the end of 2059 Ashad. One out of 86 was Matron, the director of the Nursing Department and under this Matron there were 6 sisters assigned as in charge of each inpatient door. The role and responsibility of the matron was found much essential and vital to run the hospital well. In whole IPD 71 Staff Nurses and 8 CMA/ANM/CHW/N.Aid were found performing their duty under the inchargeship of those 6 sisters.

Table 14 No. of staffs in the Nursing Department

S.No.	Position	Number
1	Matron	1
2	Sister	6
3	Staff Nurse	71
4	CMA/ANM/CHW/N.AID	8
	Total	86

Other technical staffs

Total technician working in the hospital were found to be 23 among which 11 were senior and 12 were junior technician. These figures are shown in table 14.

Table 15 No. of other technical staffs

S.No.	Position	Number
1	Senior	11
2	Junior	12
	Total	23

Administration Department

Administration manages and controls the organization. The administration is the Key part of any organization which helps to conduct whole organization by planning implementing and evaluating and also helps to measure all-round development of that organization.

Table 16 No. of Staffs in the Administration Department at the end of Ashad, 2059

S.No.	Position	Grade	Number
1	Manager	I	1
		II	1
		III	4
		Total	**6**
2	Officer	I	1
		II	6
		III	8
		Total	**15**
3	Assistant	I	3
		II	4
		III	13
		Total	**20**
		Grand total	**41**

Table 15 shows the total no. of staffs working in the administrative department of KMCTH in the end of 2059 of Ashad. There were 41 staffs working in this department where the grade was found to be divided according to the level and qualification of an individual. Six staffs were working as Manager and 15 staffs were working as subordinate of manager. Twenty staffs were working as assistant under 21 staffs

Miscellaneous

Table 16 shows the no. of remaining staffs among 451 staffs. There were two assistant to the Hospital Chief. To regulate the record section well there were two stastician. One site supervisor was found. KMCTH had provided the facility of library to the students as well as its staffs. So there were two Librarian/Assistant Librarian and 6 book checker/Library AH in the Library section. KMCTH had managed the Hostel for it's students where students stayed under the of two hostel supervisor/ Warden .

Table 16 No. of Other Staffs in KMCTH at the end of Ashad. 2059

S. No.	Position	Number
1	Assistant to the Hospital Chief	2
2	Stastician	2
3	Site Supervisor	1
4	Librarian/Assistant Librarian	2
5	Warden/Hostel supervisor	2
6	Dental Assistant	2
7	Book checker/Library AH	6
8	Driver with Helper	8
9	OPD Assistant	1
10	Tele/Com Op	3
11	Guard	13
12	Electrician	3
13	Plumber	2
14	Sec. Supervisor/Gardener	1
15	CSSD Assistant/Ward Assistant	16
16	Lab boy/Lab lady/Attainder	29
17	Peon	4
18	Sweeper/Dhobi	29
19	Cook	1
Total		127

It was found that 2 Dental Assistant, 1 OPD Assistant and 16 CSSD Assistant/Ward Assistant worked there. There were 3 telephone communication operators. To run the Ambulances, Staff Buses it had 8 drivers with helper .To provide security and to control visitors in the hospital KMCTH had its own 13 guards. In the Maintenance department there were 3 electrician and 2 plumbers involved. There was one security supervisor/gar -dener, total 29 Lab boy/Lab lady/Attendenr involved in the lab to assist the pathologist. There was one cook and one peon found. Also to make the Hospital and its each area clean and tidy there were 29 Dhobi and sweepers worked

CHAPTER FIVE
(Summary, Finding, Conclusion and Recommendation)

5.1 Summary

Patients of different age and sex groups with different disorder in different system come to KMTCH for treatment purpose. To provide preventive, curative and promotive health services to the patients, this hospital consists of different facilities such as out-patient door and in-patient door of general medicine, general surgery. Gynae, maternity and Pediatric. Pathology, USG, ECG, EEG, ENDOSCOPY, ICU/CCU, NICU, are the diagnostic services. Operation Theater and 24 hour emergency services are the essential services provided by this hospital. Thus, KMCTH was selected for case study to find out the prevalence rate of cholelithiasis and involvement of age and sex groups in this disease. As the cholelithiasis is the surgical case, patients were admitted in the surgical IPD for the surgical treatment of this disease. So the surgical ward was chosen for this study. The cases of cholelithiasis admitted in the surgical ward in the years 2058 BS and 2059 BS were studied to fulfill the objectives of this study and the retrospective analysis method and descriptive research design method was used.

It was found from the study that the no. of inpatient were more in General medicine. The flow of patient in the KMCTH was increased in the year 2059 BS than in the year 2058 BS. In surgical ward, patients with different disorder system were admitted. Cholelithiasis was found most prevalent disease in this ward. Cholelithiasis is a metabolic disorder of biliary tract where stone is formed in the gall bladder. During the time of study period, the most susceptible age group was found to be 31-35 years group and the most susceptible sex group was found to be the female.

The collected findings were presented through the tables and charts.

5.2 Findings

The study found that the prevalence was more in female sex and the most affected age group was 31-35 years age. In 2058 BS the no. of affected females were 118 (85.5%) where male were only 20(14.5%) among 138 total inpatients of cholelithiasis. The affected age group was found to be 31-35 years. Total 25 patients of age group of 31-35 years were admitted due to cholelithiasis in 2058 BS. The less affected age group was found to be 15-20 years where only 3 female patients were admitted with absence of male cases in this age group in 2058. In 2059 BS the no. of affected females were 138 (86.3%) and the male were 29 (13.7%) out of 167 total inpatients of cholelithiasis. In 2059 the affected age group was found to be 31-35 years (like in the year 2058) consisting 32 patients. In this year also the less affected age group was found to be 15-20 years. No male case was seen and 2 female cases were admitted in this age group.

It was found in 2058 BS that the prevalence of cholelithiasis was 21.56 % (138 among 640 patients) and the monthly prevalence was highest in the month of Baisakh which was found to be 36.3% and lowest in the month of Bhadra which was found to be 7.5%.

But in the year 2059 BS the prevalence of Cholelithiasis was found to be 15.76% (167 among 1059 patients). And the monthly prevalence was found to be the highest in the month of Poush (25%) and lowest in Falgun which was only 8.95%.

According to this study it was seen that the total inpatient was higher in Medical ward both in the year of 2058 and 2059 BS. In 2058 BS, 27.83% medical cases were admitted in the medical ward out of total 3054 in-patient cases and in the year 2059 BS total of 31.07% cases were admitted in the medical ward out of 6086 in-patient cases in KMCTH.

Among total surgical inpatient cases in 2058 and 2059 BS, cholelithiasis was found as the common case. Other common cases where male and female both were affected were appendicitis, hemorrhoids, renal stone, hernia and the common case where only the male were affected were BEP and Hydrocele.

In this study the knowledge and attitude towards cholelithiasis was found to be positive among patient parties. Cent percent among 100 patient parties knew the meaning of cholelithiasis that it is the stone inside the Gall bladder. About the knowledge having the predisposing factor, 67% had considered to be the dietary factor. 26% thought due to environmental pollution, 5% thought due to hereditary and 2% thought that cholelithiasis would occur due to swallowing of stone with food. About the painful region in this disease, 50% told the location of painful region was rt. upper abdomen, 30% told it to be left upper abdomen, 6% had no any idea about it and 14 % told it to be whole abdomen. In this study it was found that 99% patient parties have considered this disease to be non-communicable and 1% told it was the communicable disease. Cent percent patient parties favored the treatment of cholelithiasis by surgery.

For better treatment, 97% had view towards Allopathic treatment and 3% had in the Ayurvedic center. Regarding food sixty-five percent had preference of boiled type of diet for cholelithiasis patient, where 20% were found in the favor of low fat and less spicy diet. But 15% of them were in favor of normal diet to the cholelithiasis patient. About preferred treatment by the patient, 96% of the patient chose surgical treatment and 2% had the attitude that drinking of plenty fluids would cure cholelithiasis. Two percent had positive attitude toward Ayurvedic treatment. Nobody was in the favor of traditional method of treatment i.e. Dhami Jhakri for cholelithiasis.

About the Human resources of KMCTH there were total of 417 staffs contributing to KMCTH at the end of Ashad 2059. Among them, 74 were working in faculty department, 65 in clinical department, 86 in nursing department, 23 were working as technician, 41 were working in administration department and other 126 were working as sweepers, peons, Lab boys etc.

5.3 Conclusion

According to the findings of this study the conclusions are presented as follows:

1. From this study it was found that the cholelithiasis was highly prevalent in the female than in the male. Also the age group of 31-35 years was found to be the most susceptible age group than other and the age group of 15-20 years was found to be the least affected age groups by cholelithiasis.

2. This study showed the in-patient flow is higher in the medical ward than in others.

3. From this study it was found that the morbidity was also higher in pediatric group in the year 2059 BS.

4. The common surgical case was found to be the gall stone (Cholelithiasis) among the in-patient cases of surgical ward.

5. The knowledge and attitude toward cholelithiasis was found positive among patient parties and it was quite satisfactory.

6. The human resources in clinical department and surgical department were found to be insufficient in KMCTH.

5.4 Recommendation

From the study following recommendations are made:

1. Survey should be done to the remote area to find out the cases of cholelithiasis by conducting the camp, mobile clinic or out-rich clinic with providing existing treatment facilities for those who can not afford.

2. This study showed that the medical cases, psychiatric cases and the Pediatric cases were high, so awareness for prevention should be created among the public about above mentioned cases.

3. Though it seemed the human resources of the KMCTH was enough according to the count number, the human resources of KMCTH should be balanced on the basis of the ratio of patients.

4. It was seen that the wastes of the KMCTH were taken by the vehicle of the metropolitan city without coverage. So the waste material should be send with covered vehicle to prevent from falling of these waste materials.

5. The hospital consisted six storied building but there was no grill or net seen at the site of the windows in some ward like surgery ward which was on the fifth floor of that building. So there would be chance to fall down an individual by accidentally or suicidal attempt. To prevent these types of accidents hospital should manage the grill or net in those ward.

Bibliography

1. Annual Report 2059 published by the KMCTH

2. JSSN, Journal Of Society of Surgeons of Nepal, Vol. 2 no. 2, Aug. 1999, published by the Society Of Surgeons Of Nepal.

3. JSSN, Journal Of society of Surgeons of Nepal, Vol.4 no.1. May 2001, published by Society of Surgeons of Nepal.

4. NMCJ, Nepal Medical College Journal , vol.4 Dec.2002, published by the Nepal Medical College.

5. Annual Report 2058/2059 DOH Services, published by the HMG of Nepal Ministry of Health, DOH Services Kathmandu.

6. JKMC, Journal Of Kathmandu Medical College,vol.1 no.1 ,September 1999, published by the Kathmandu Medical College.

7. Web sites:
   a. WWW.healthnet.org.np/journal/jnmc/jnma132/def.pdf.
   b. WWW. Findex.com/surgery/

Appendix

2060

The questionnaire for patient relatives came in KMCTH about knowledge and attitude towards cholelithiasis.

Name of interviewer:

Name of interviewee:

Address:
Zone: **District:** **VDC/Municipality:**

Other Information:
Cast: **Religion:**
Occupation: **Education:**

Questionnaire about knowledge of Cholelithiasis:

1. **What do you mean by cholelithiasis?**
   a. inflammation of Gall bladder b. infection of Gall bladder
   c. Stone of Gall bladder d. No idea

2. **Is Cholelithiasis a communicable disease?**
   a. Yes b. No

3. **The main predisposing factor of Cholelithiasis is:**
   a. Hereditary b. environmental pollution
   c. Diet Pattern (high spicy and fatty food) d. By swallowing stone

4. **The most painful region in Cholelithiasis is:**
   a. Right upper abdomen b. Left upper abdomen
   c. Whole abdomen d. No idea

5. **The best treatment of cholelithiasis is:**
   a. Conservative (By taking medicines) b. Surgical (By operation)

Questionnaire about Attitude towards cholelithiasis:

1. **If somebody is diagnosed of cholelithiasis , S/He should be first taken to..... For the purpose of treatment.**
   a. Dhami/Jhakri
   b. Hospitals/Health centers
   c. Ayurvedic Hospitals
   d. Homeopathic centers

2. **The diet for patient of cholelithiasis is:**
   a. Boiled type diet
   b. Normal diet
   c. High fatty and spicy diet
   d. Low fatty and spicy diet.

3. **If you are suffered from cholelithiasis , which treatment would you like to prefer?**
   a. Drinking plenty of fluid.
   B. Surgical treatment
   C. Traditional therapy(Dhami/Jhakri)
   d. Ayurvedic Therapy

THANK-YOU