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"A STUDY OF GASTROESOPHAGEAL REFLUX DISEASE IN CHOLELITHIASIS"

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ABSTRACT

CHOLELITHIASIS, A WIDESPREAD GLOBAL CONCERN, OFTEN NECESSITATES SURGERY. SYMPTOMS VARY, AND GALLSTONES MAY NOT SOLELY TRIGGER SYMPTOMS, REQUIRING PRECISE DIAGNOSIS TO PREVENT UNNECESSARY CHOLECYSTECTOMIES. EMPLOYING UPPER GI ENDOSCOPY ASSISTS IN ACCURATE DIAGNOSIS, AVERTING SYMPTOM MISINTERPRETATION. THIS STUDY DELVES INTO THE CORRELATION BETWEEN CHOLELITHIASIS, GERD, AND THEIR SYMPTOMS, ADVOCATING PREOPERATIVE UPPER GI ENDOSCOPY TO DETECT ASSOCIATED UPPER GI DISORDERS AND MINIMIZE UNNECESSARY SURGERIES.

THE AIM IS TO PROBE THE RELATIONSHIP BETWEEN GERD AND CHOLELITHIASIS. OBJECTIVES INCLUDE EVALUATING GERD SYMPTOMS USING THE "GERDQ" SCORE, SCRUTINIZING UPPER GI ENDOSCOPY FINDINGS, AND CORRELATING GERDQ SCORES WITH ENDOSCOPY RESULTS IN 120 PATIENTS FROM GMC, GGH ANANTAPURAMU. INCLUSION CRITERIA ENCOMPASS PATIENTS AGED 18 OR OLDER WITH CONFIRMED GALLBLADDER STONES VIA ABDOMINAL ULTRASOUND, CONSENTING TO PARTICIPATE IN THE STUDY. EXCLUSIONS COMPRISE COMPLEX GALLSTONE CONDITIONS. STATISTICAL ANALYSIS PERFORMED USING SPSS 16.0 SOFTWARE.

AMONG 120 PATIENTS WITH DYSPEPTIC SYMPTOMS AND CONFIRMED CHOLELITHIASIS, THOSE AGED 30-60 YEARS (65.8%) WERE PREDOMINANT, WITH

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FEMALES CONSTITUTING 64.2%. NAUSEA, REGURGITATION, HEARTBURN, AND ABDOMINAL PAIN WERE PREVALENT SYMPTOMS, WITH GASTRITIS/GASTRIC ULCERS (45.8%) AS THE MOST FREQUENT ENDOSCOPIC FINDINGS. THE GERDQ SCORE EFFICIENTLY SCREENS PATIENTS AND HAS POSITIVE CORRELATION WITH GERD. TYPICAL ENDOSCOPIC FINDINGS INCLUDE GASTRITIS/GASTRIC ULCERS, HIATUS HERNIA, ESOPHAGITIS, AND DUODENITIS. INITIAL MEDICAL MANAGEMENT IS ADVISED FOR PATIENTS WITH DYSPEPSIA, GALLSTONES, HIGH GERDQ SCORES, AND SIGNIFICANT ENDOSCOPIC FINDINGS.

ROUTINE PREOPERATIVE UPPER GI ENDOSCOPY IS RECOMMENDED FOR ALL DYSPEPTIC PATIENTS WITH GALLSTONE DISEASE TO AVOID UNNECESSARY CHOLECYSTECTOMY.

KEYWORDS

CHOLELITHIASIS, GERD, GERDQSCORE, ESOPHAGITIS, LOSANGELES GRADING, UPPERGIENDOSCOPY, CHOLECYSTECTOMY, POST CHOLECYSTECTOMY SYNDROME

INTRODUCTION

CHOLELITHIASIS, COMMONLY KNOWN AS GALLSTONE DISEASE, PRESENTS A SIGNIFICANT HEALTH CHALLENGE GLOBALLY, PARTICULARLY IN DEVELOPED NATIONS, WHERE IT AFFECTS APPROXIMATELY 10% TO 15% OF ADULTS[1-9,] WITH AN ESTIMATED ANNUAL ECONOMIC BURDEN OF ABOUT $6.2 BILLION IN THE USA ALONE. IT RANKS AMONG THE LEADING CAUSES OF HOSPITAL ADMISSIONS FOR GASTROINTESTINAL CONDITIONS. THE PREVALENCE AND TYPES OF GALLSTONES VARY SIGNIFICANTLY DEPENDING ON GEOGRAPHICAL LOCATION AND ETHNICITY. IN THE WESTERN WORLD, CHOLESTEROL GALLSTONES ARE PREDOMINANT, WHILE BROWN PIGMENT STONES ARE MORE COMMON IN ASIA. THE HIGHEST PREVALENCE IS OBSERVED AMONG AMERICAN INDIANS AND NORTHERN EUROPEANS, FOLLOWED BY AMERICAN AND EUROPEAN WHITE POPULATIONS, WHILE ASIAN COUNTRIES HAVE INTERMEDIATE RATES, AND AFRICAN NATIONS GENERALLY HAVE LOWER RATES.

DISEASE PREVALENCE

NORTHERN INDIA DEMONSTRATES A HIGHER PREVALENCE OF GALLBLADDER DISEASES COMPARED TO SOUTHERN REGIONS, AS ILLUSTRATED BY VARIOUS HOSPITAL-BASED STUDIES. FOR EXAMPLE, RESEARCH CONDUCTED AT BENARAS HINDU UNIVERSITY HOSPITAL IN VARANASI REPORTED A 13.44% PREVALENCE OF ASYMPTOMATIC GALLBLADDER DISEASES AND 11.14% FOR CHOLELITHIASIS[10]. IN CHANDIGARH, AMONG GALLSTONE PATIENTS, 3.3% WERE ASYMPTOMATIC, WHILE 64.9% EXPERIENCED SYMPTOMS[11.] ANOTHER STUDY IN NEW DELHI REPORTED A GALLSTONE DISEASE PREVALENCE OF 29.8%[12]. IN URBAN KASHMIR, GALLSTONE PREVALENCE AMONG ADULTS RANGED FROM 6-12%[13], WITH HIGHER RATES OBSERVED AMONG MULTIPAROUS FEMALES OF HIGH

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SOCIOECONOMIC STATUS.

RISK FACTORS

CHOLELITHIASIS ARISES FROM VARIOUS FACTORS, CLASSIFIED AS NON-MODIFIABLE AND MODIFIABLE RISKS. NON-MODIFIABLE RISKS INCLUDE FAMILY HISTORY, GENETICS, ETHNICITY, FEMALE GENDER, AND AGE. MODIFIABLE RISKS INVOLVE OBESITY, METABOLIC SYNDROME, DIABETES, DYSLIPIDEMIA, CERTAIN MEDICATIONS, REDUCED PHYSICAL ACTIVITY, RAPID WEIGHT LOSS, TOTAL PARENTERAL NUTRITION, DIETARY FACTORS, AND UNDERLYING CONDITIONS SUCH AS CROHN'S DISEASE, INFLAMMATORY BOWEL DISEASE (IBD), AND CIRRHOSIS.

GALL STONES FORMATION

THE FORMATION OF CHOLESTEROL GALLSTONES PRIMARILY RESULTS FROM ABNORMALITIES SUCH AS EXCESSIVE BILE SATURATION, CONCENTRATED BILE IN THE GALLBLADDER, CRYSTAL NUCLEATION, AND IMPAIRED GALLBLADDER MOTILITY[14-16]. CHOLESTEROL SOLUBILITY RELIES ON THE RELATIVE CONCENTRATIONS OF CHOLESTEROL, BILE SALTS, AND PHOSPHOLIPIDS. MICELLE FORMATION, WHICH INVOLVES A CHOLESTEROL-PHOSPHOLIPIDS-BILESALT COMPLEX, IS CRUCIAL FOR MAINTAINING CHOLESTEROL SOLUBILITY. GALLSTONE FORMATION INCREASES IN CONDITIONS LIKE PROLONGED FASTING, TOTAL PARENTERAL NUTRITION, VAGOTOMY, AND THE USE OF SOMATOSTATIN ANALOGUES, ALL OF WHICH IMPAIR GALLBLADDER EMPTYING. PIGMENT STONES, ON THE OTHER HAND, RESULT FROM EXCESS BILIRUBIN IN BILE DUE TO RED BLOOD CELL BREAKDOWN [16]

SYMPTOMATOLOGY

SYMPTOMS OF CHOLELITHIASIS VARY, WITH SOME INDIVIDUALS REMAINING ASYMPTOMATIC, WHILE OTHERS EXPERIENCE POSTPRANDIAL RIGHT UPPER QUADRANT PAIN KNOWN AS BILIARY COLIC DUE TO CYSTIC DUCT OBSTRUCTION. COMPLICATIONS SUCH AS ACUTE CHOLECYSTITIS, CHOLEDOCHOLITHIASIS, AND GALLSTONE PANCREATITIS MAY ARISE AS GALLSTONES PROGRESS[17]. ASYMPTOMATIC CHOLELITHIASIS, OFTEN TERMED "SILENT" IS FREQUENTLY DISCOVERED INCIDENTALLY DURING UNRELATED ABDOMINAL ULTRASOUNDS. MOST PATIENTS WITH GALLSTONES REMAIN SYMPTOM-FREE, MAKING EXPECTANT MANAGEMENT SUITABLE FOR SILENT GALLSTONES.

MANAGEMENT

REGARDING THE MANAGEMENT OF GALLSTONES, ASSUMING GALLSTONES AS THE CAUSE OF SYMPTOMS, LAPAROSCOPIC CHOLECYSTECTOMY IS TYPICALLY RECOMMENDED FOR SYMPTOMATIC CASES. HOWEVER, CHOLECYSTECTOMY MAY NOT ALLEVIATE SYMPTOMS IN ALL CASES AND CAREFUL EVALUATION IS NECESSARY TO EXCLUDE OTHER UNDERLYING CAUSES OF SYMPTOMS, PARTICULARLY IN SUSPECTED CASES OF ACALCULOUS GALLBLADDER DISEASE. PROPHYLACTIC CHOLECYSTECTOMY IS GENERALLY NOT RECOMMENDED FOR ASYMPTOMATIC INDIVIDUALS WITH GALLSTONES UNLESS CERTAIN RISK FACTORS ARE PRESENT [18.]

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GASTROESOPHAGEAL REFLUX DISEASE (GERD) AND ITS DIAGNOSIS

GASTROESOPHAGEAL REFLUX DISEASE (GERD), CHARACTERIZED BY INCREASED REFLUX FREQUENCY AND VOLUME, IS A GLOBAL HEALTH CONCERN, CAUSING SYMPTOMS LIKE HEARTBURN AND REGURGITATION[19]. WHILE MORE PREVALENT IN THE WESTERN WORLD, ITS INCIDENCE IS ALSO INCREASING IN ASIA. VARIOUS STUDIES HAVE REPORTED PREVALENCE RATES OF GERD IN DIFFERENT REGIONS. THE ESOPHAGUS COMPRISES THREE SEGMENTS: CERVICAL, THORACIC, AND ABDOMINAL, EACH WITH ITS UNIQUE ANATOMICAL FEATURES. THE NORMAL ANTI-REFLUX MECHANISM INVOLVES MULTIPLE COMPONENTS, WITH THE LOWER ESOPHAGEALSPHINCTER (LES) PLAYING A CRUCIALROLE. TRANSIENT LOWER ESOPHAGEAL SPHINCTER RELAXATIONS (TLESRS) ARE THE PRIMARY MECHANISM UNDERLYING GERD, ALONG WITH FACTORS LIKE HIATUS HERNIA AND ESOPHAGEAL DYSMOTILITY.

DIAGNOSING GERD OFTEN INVOLVES UPPER GI ENDOSCOPY, AMONG OTHER TESTS, ALTHOUGH EACH METHOD HAS ITS LIMITATIONS. MULTICHANNEL INTRALUMINAL IMPEDANCE-PH (MII-PH) IS CONSIDERED THE GOLD STANDARD FOR GERD DIAGNOSIS[20]. DESPITE THE AVAILABILITY OF VARIOUS DIAGNOSTIC TOOLS, ACCURATELY DIAGNOSING GERD CAN BE CHALLENGING AND RESOURCE-INTENSIVE.

ENDOSCOPIC FEATURES OF GERD

LOSANGELES CLASSIFICATION FOR THE ENDOSCOPIC ASSESSMENT OF REFLUX OESOPHAGITIS [21]

GRADE A: ONE OR MORE MUCOSAL BREAKS NO LONGER THAN 5 MM, NONE OF WHICH EXTENDS BETWEEN THE TOPS OF THE MUCOSAL FOLDS.

GRADE B: ONE OR MORE MUCOSAL BREAKS MORE THAN 5 MM LONG, NONE OF WHICH EXTENDS BETWEEN THE TOPS OF TWO MUCOSAL FOLDS.

GRADE C: MUCOSAL BREAKS EXTEND BETWEEN THE TOPS OF TWO OR MORE MUCOSAL FOLDS BUT INVOLVE LESS THAN 75% OF THE ESOPHAGEAL CIRCUMFERENCE.

GRADE D: MUCOSAL BREAKS, WHICH INVOLVE ATLEAST 75% OF THE OESOPHAGEAL CIRCUMFERENCE.

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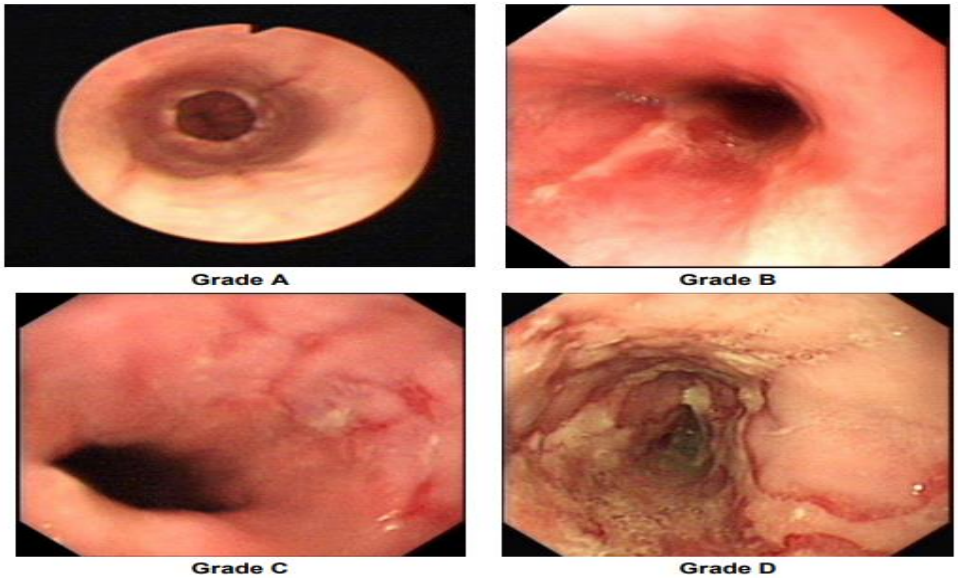

IMAGE 1 : LOS ANGELES GRADING ON UPPER GI ENDOSCOPY

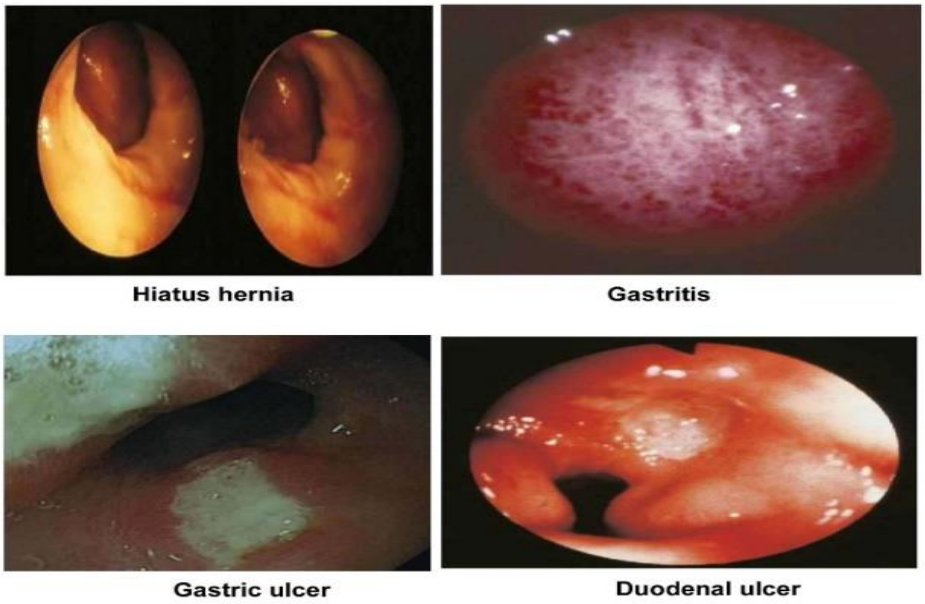

IMAGE 2 : OTHER UPPER GI ENDOSCOPY FINDINGS IN THE STUDY

MANY INDIVIDUALS WITH SYMPTOMS OF GASTROESOPHAGEAL REFLUX DISEASE (GERD) MAY NOT EXHIBIT VISIBLE BREAKS IN THE ESOPHAGEAL MUCOSA DURING ENDOSCOPY; A CONDITION REFERRED TO AS ENDOSCOPIC NEGATIVE REFLUX DISEASE (ENRD). THIS HAS PROMPTED A SHIFT IN THE APPROACH TO DIAGNOSIS AND TREATMENT FOR SUCH PATIENTS. CURRENT GUIDELINES RECOMMEND A SYMPTOM-BASED STRATEGY FOR DIAGNOSING AND MANAGING YOUNG PATIENTS IN PRIMARY CARE, ESPECIALLY THOSE WITH A SHORT DURATION OF THE DISEASE AND NO ALARMING SYMPTOMS

SEVERAL QUESTIONNAIRES HAVE BEEN DEVELOPED TO ASSIST IN THE SYMPTOM-BASED DIAGNOSIS AND MANAGEMENT OF GERD, INCLUDING THE

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GERD IMPACT SCALE (GIS) AND THE REQUEST QUESTIONNAIRE. HOWEVER, MANY OF THESE TOOLS ARE NOT SPECIFICALLY DESIGNED OR VALIDATED FOR DIAGNOSTIC PURPOSES AND MAY BE TOO COMPLEX FOR ROUTINE CLINICAL USE.

THE SENSITIVITY AND SPECIFICITY OF SYMPTOMS SUCH AS HEARTBURN AND REGURGITATION FOR DIAGNOSING GERD CAN VARY SIGNIFICANTLY DEPENDING ON THE CRITERIA SET FOR FREQUENCY AND INTENSITY. ADDITIONALLY, GERD SYMPTOMS CAN OVERLAP WITH THOSE OF OTHER CONDITIONS SUCH AS FUNCTIONALDYSPEPSIA AND EXTRA-ESOPHAGEALSYNDROMES LIKE CHRONIC COUGH AND ASTHMA.

THE GERDQ QUESTIONNAIRE INCORPORATES QUESTIONS FROM VARIOUS ESTABLISHED SCALES AND AIMS TO ASSIST IN GERD DIAGNOSIS AND TREATMENT SELECTION BASED ON RESPONSE ASSESSMENT. DEVELOPED FROM RECENT CLINICAL STUDIES AND PATIENT INTERVIEWS, GERDQ OFFERS A USER-FRIENDLY, 6-ITEM FORMAT FOR PRIMARY CARE PATIENTS WITH UPPER GI COMPLAINTS, SHOWING COMPARABLE DIAGNOSTIC ACCURACY TO ASSESSMENTS BY GASTROENTEROLOGISTS AND OUTPERFORMING ROUTINE SYMPTOM-BASED DIAGNOSES IN PRIMARY CARE SETTINGS.

THE ASSOCIATION BETWEEN CHOLELITHIASIS AND GERD REMAINS UNCERTAIN, WITH PREVALENCE STUDIES YIELDING CONFLICTING RESULTS REGARDING THE RELATIONSHIP BETWEEN ABDOMINAL SYMPTOMS AND GALLSTONES. IN BRAZIL, OLIVEIRA SS et al. FOUND A 31.3% PREVALENCE OF GERD AMONG INDIVIDUALS WITH GALLSTONES, MORE COMMON IN WOMEN[22, 23-26]. HOWEVER, OTHER STUDIES, SUCH AS THOSE BY AVIDAN B et al[3] AND MARTINEZ PANCORBO C et al [3] DID NOT ESTABLISH A CLEAR LINK BETWEEN CHOLELITHIASIS AND GERD.

A STUDY BY MATSUZAKIJ et al. IN A JAPANESE OUTPATIENT POPULATION SUGGESTED AN INDEPENDENT ASSOCIATION BETWEEN THE PRESENCE OF GALLSTONES AND ENDOSCOPICALLY SUSPECTED ESOPHAGEAL METAPLASIA (ESEM), INDICATING A POTENTIAL CAUSAL RELATIONSHIP BETWEEN DISTAL ESOPHAGEAL BILE EXPOSURE AND ESEM DEVELOPMENT [27].

IZBÉKI F et al. INVESTIGATED THE PREVALENCE OF GALLSTONES IN PATIENTS WITH BARRETT'S ESOPHAGUS (BE) AND COMPARED GALLBLADDER MOTILITY AMONG HEALTHY VOLUNTEERS AND GERD PATIENTS WITHOUT BARETTS. THEY FOUND A SIGNIFICANTLY HIGHER PREVALENCE OF GALLSTONES INPATIENTS WITH BARETTS COMPARED TO THOSE WITH OUT BARRETTS [28]. DESPITE THESE FINDINGS, THE OCCURRENCE OF GALLSTONES IN GERD REMAINS CONTROVERSIAL, WITH PREVALENCE STUDIES ON BILIARY PAIN SHOWING CONTRADICTORY RESULTS REGARDING THE ASSOCIATION BETWEEN BILIARY PAIN AND GALLSTONES.

CHOLECYSTECTOMY SIGNIFICANTLY ALTERS THE DYNAMICS OF BILE COMPOSITION AND SECRETION. NORMALLY, THE GALLBLADDER ACTS AS A RESERVOIR FOR BILE, ALLOWING IT TO BECOME CONCENTRATED BETWEEN MEALS. WHEN FOOD ENTERS THE DUODENUM, CHOLECYSTOKININ (CCK) IS

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RELEASED, CAUSING GALLBLADDER CONTRACTION AND RELAXATION OF THE SPHINCTER OF ODDI, FACILITATING THE RELEASE OF CONCENTRATED BILE INTO THE DUODENUM.

AFTER CHOLECYSTECTOMY, SEVERAL CHANGES OCCUR: LOSS OF RESERVOIR FUNCTION: WITHOUT THE GALLBLADDER, BILE CONTINUOUSLY FLOWS INTO THE INTESTINE, LEADING TO A LOSS OF CONCENTRATION. THIS CONTINUOUS FLOW ALSO TRIGGERS ENHANCED FEEDBACK INHIBITION OF HEPATIC BILE SALT SYNTHESIS, REDUCING THE SIZE OF THE BILE SALT POOL. INCREASED BILE FLOW: THE ABSENCE OF A GALLBLADDER LEADS TO INCREASED AND CONTINUOUS BILE FLOW INTO THE INTESTINE, THIS HEIGHTENED FLOW CAN RESULT IN INCREASED RETROGRADE REFLUX OF BILE THROUGH THE PYLORUS VIA DUODENOGASTRIC AND GASTRODUODENAL REFLUX.

ALTERATION IN BILE SALT COMPOSITION

CHOLECYSTECTOMIZED PATIENTS EXPERIENCE CHANGES IN BILE SALT COMPOSITION, THE POOL OF PRIMARY BILE SALTS, SUCH AS CHOLATE AND CHENODEOXYCHOLATE, IS REDUCED, WHILE THE DEOXYCHOLATE POOL REMAINS RELATIVELY NORMAL. CONSEQUENTLY, THE TOTAL BILE SALT POOL IS REDUCED BY ALMOST HALF, WITH DEOXYCHOLATE BECOMING THE PREDOMINANT BILE SALT. THIS ALTERATION ALSO INCREASES THE ENTEROHEPATIC CIRCULATION OF THE REDUCED BILE SALT POOL. OVERALL, CHOLECYSTECTOMY DISRUPTS THE FINELY TUNED MECHANISMS REGULATING BILE COMPOSITION AND SECRETION, LEADING TO SIGNIFICANT CHANGES IN BILE DYNAMICS AND POTENTIALLY CONTRIBUTING TO GASTROINTESTINAL SYMPTOMS SUCH AS REFLUX.

THIS STUDY EXAMINES THE RELATIONSHIP BETWEEN CHOLELITHIASIS AND GERD BY ANALYZING PATIENT SYMPTOMS AND ENDOSCOPIC FINDINGS. IT COMPARES ITS RESULTS TO PREVIOUS RESEARCH AND ANTICIPATES THAT CHOLELITHIASIS PATIENTS WITH HIGH GERD SCORES WILL ALSO EXHIBIT POSITIVE UPPER GI FINDINGS, SUGGESTING POTENTIAL TREATMENT BENEFITS.

RESULTSANDANALYSIS

GENDER	FREQUENCY	PERCENT	AGEGROUP	FREQUENCY	PERCENT
MALE	43	35.8	<30YEARS	24	20

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FEMALE	77	64.2	30 TO60YEARS	79	65.8
			>60YEARS	17	14.2
TOTAL	120	100	TOTAL	120	100

AGE-WISE, CHOLELITHIASIS IS MOST COMMON BETWEEN 30 TO 60 YEARS, WITH 65.8% AGED 30-60 AND 20% UNDER 30. REGARDING GENDER, 64.2% OFPARTICIPANTS WERE FEMALE, CONSISTENT WITH THE HIGHER PREVALENCE OF CHOLELITHIASIS IN FEMALES.

TABLE NO 1: AGE AND SEX DISTRIBUTION

GERDQ SCORE IN THIS STUDY, 66 PATIENTS (55%) HAD GERDQ SCORES < 8, 15 PATIENTS (39%) SCORED BETWEEN 8 TO 10, AND 39 PATIENTS (32.5%) HAD SCORES > 10.

GENDER	GERDQSCOREGROUP	FREQUENCY	PERCENT
MALE	<8	18	15
	8TO10	9	7.5
	>10	16	13.3
	TOTAL	43	35.8
FEMALE	<8	48	40
	8TO10	6	5
	>10	23	19.2
	TOTAL	77	64.2
TOTAL		120	100

TABLE NO 2: GERDQ SCORE SEX WISE IN 3 GROUPS

GERDQ SCORES BY GENDER AMONG FEMALES, 48 OUT OF 77 HAD SCORES < 8, WHEREAS MALES HAD A MORE BALANCED DISTRIBUTION ACROSS SCORE GROUPS, SUGGESTING MALES EXPERIENCE DYSPEPTIC SYMPTOMS MORE COMPARABLY TO FEMALES.

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SYMPTOM	FREQUENCY	PERCENTAGE
EPIGASTRIC BURNING SENSATION	102	85%
REGURGITATION	120	100%
SLEEP DISTURBANCE	60	50%
EPIGASTRIC PAIN	84	70%
NAUSEA	120	100%
OTC MEDICATION	120	100%
LOSANGELES GRADING	FREQUENCY	PERCENTAGE
NO FINDINGS	75	62.5
LAGRADE1	9	7.5%
LAGRADE2	27	22.5%
LAGRADE3	6	5%
LAGRADE4	3	2.5%
HIATUSHERNIA		
ABSENT	78	65%
PRESENT	42	35%
GASTRITIS_GASTRIC ULCER		
ABSENT	65	54.2%
PRESENT	55	45.8%
DUODENITIS		
ABSENT	112	93.3%
PRESENT	8	6.7%
DUODENALULCER		
ABSENT	111	92.5%
PRESENT	9	7.5%
TOTAL	120	100%

TABLE NO 3: SUMMARY OF ENDOSCOPY FINDINGS

NAUSEA AND REGURGITATION WERE PREVALENT IN ALL SUBJECTS, WITH EPIGASTRIC BURNING AFFECTING 85%. SLEEP DISTURBANCE OCCURRED IN 50%, WHILE 44.2% USED MEDICATION 2-3 DAYS WEEKLY FOR SYMPTOMS TABLE NO 3: SUMMARY OF ENDOSCOPY FINDINGS

NAUSEA AND REGURGITATION WERE PREVALENT IN ALL SUBJECTS, WITH EPIGASTRIC BURNING AFFECTING 85%. SLEEP DISTURBANCE OCCURRED IN 50%, WHILE 44.2% USED MEDICATION 2-3 DAYS WEEKLY FOR SYMPTOMS LIKE EPIGASTRIC PAIN AND REGURGITATION.

IN THIS STUDY, AMONG 120 GALLSTONE DISEASE PATIENTS UNDERGOING EGD, 96 (80%) SHOWED POSITIVE UPPER GASTROINTESTINAL RESULTS, WHILE 24 (20%) HAD

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NEGATIVE FINDINGS. THE PREVALENT POSITIVE FINDINGS WERE GASTRITIS IN 55 PATIENTS (45.8%) AND ESOPHAGITISIN 45 PATIENTS (37.5%), WITH LOS ANGELES GRADE 3

AGE GROUP	PRESENT	SOSADA[59]	AL-OBAIDI [60]	GAHARWAR[61]

BEING THE MOST COMMON TYPE (22.5%). HIATUS HERNIA RANKED THIRD, OBSERVED IN 42 PATIENTS (35%). NO EGD-RELATED COMPLICATIONS OCCURRED DURING THE STUDY

SEX	PRESENT SERIES (%)	MOZAFAR SERIES (%)	URE SERIES (%)	GAHARWAR SERIES (%)
MALE	35.8	25.87	25	91.66
FEMALE	64.2	74.15	75	8.33

ABNORMAL ENDOSCOPIC FINDINGS WERE OBSERVED IN 80% OF SUBJECTS. ESOPHAGITIS WAS PREVALENT IN 37.5%, MOSTLY LA GRADE 2. HIATUS HERNIA AFFECTED 35%, WHILE GASTRITIS/GASTRIC ULCERS WERE PRESENT IN 45.8%. DUODENITIS AND DUODENAL ULCERS WERE LESS COMMON.

DISCUSSION

AGEDISTRIBUTION

TABLE NO 4: COMPARISON OF AGE DISTRIBUTION WITH PREVIOUS STUDIES

IN THIS STUDY, THE PREDOMINANT AGE GROUP FOR CHOLELITHIASIS AND DYSPEPSIA IS 30 TO 60 YEARS, REPRESENTING 65.8%, FOLLOWED BY THOSE UNDER 30 YEARS AT 20%. SIMILAR TRENDS WERE OBSERVED IN THE SOSADA[31] AND AL-OBAIDI[32] SERIES, EMPHASIZING THE 30-60 AGE RANGE.

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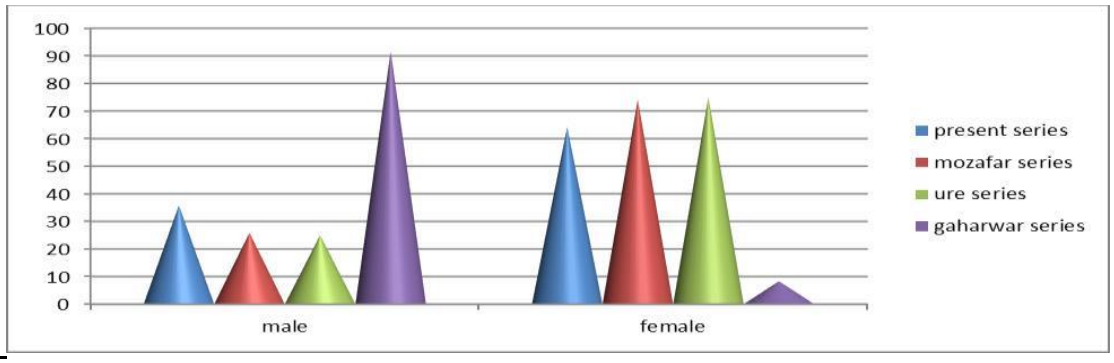
	SERIES (%)	SERIES (%)	SERIES (%)	SERIES (%)
<30YEARS	20	8	5.88	15.16
30-60 YEARS	65.8	60	64.71	81.81
>60YEARS	14.2	32	29.41	3.03

TABLE NO 5: SEX DISTRIBUTION AMONG VARIOUS STUDY SERIES



GRAPH NO 2: SEX DISTRIBUTIONAMONG VARIOUS STUDY SERIES

BOTH GALLSTONES AND DYSPEPSIA ARE PREVALENT IN MIDDLE-AGE, CONSISTENT WITH PREVIOUS FINDINGS. THIS STUDY'S AGE DISTRIBUTION ALIGNS FAIRLY WITH PRIOR RESEARCH.

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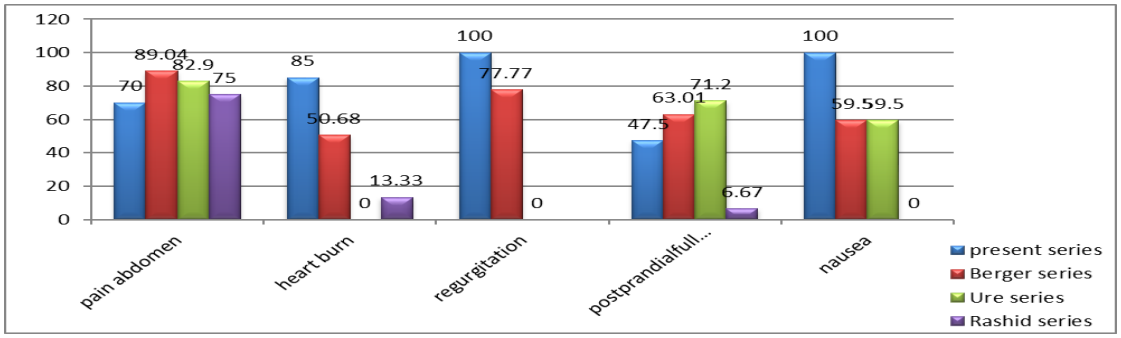
IN THIS STUDY, CHOLELITHIASIS WITH DYSPEPSIA WAS MORE COMMON IN FEMALES, COMPRISING 64.2% OF THE GROUP. SIMILAR FEMALE PREDOMINANCE WAS NOTED IN THE MOZAFAR [33] AND URE [34] SERIES.

DYSPEPTIC SYMPTOMS

SYMPTOMS	PRESENT SERIES (%)	BERGER[30] SERIES (%)	URE[62] SERIES (%)	RASHID[63] SERIES (%)
PAINABDOMEN	70	89.04	82.9	75
HEARTBURNS	85	50.68		13.33
REGURGITATION	100	77.77		
POST PRANDIAL FULLNESS	47.5	63.01	71.2	6.67
NAUSEA	100	59.5	59.5	

TABLENO: 6 DYSPEPTIC SYMPTOMS INVARIOUS SERIES

REGURGITATIONOFFOOD&NAUSEA WERETHE MOST COMMONDYSPEPTIC SYMPTOMS, VARYING IN INTENSITY, FOLLOWED BY HEARTBURN AND PAIN ABDOMEN, REPRESENTING 85% AND 70%, RESPECTIVELY.



GRAPH NO: 3 DYSPEPTIC SYMPTOMS IN VARIOUS SERIES

WHILE ABDOMINAL PAIN PREDOMINATED IN SOME STUDIES LIKE RASHID, URE, AND BERGER SERIES, THIS STUDY DIFFERED, WITH NAUSEA AND REGURGITATION AS PREVALENT SYMPTOMS [22, 34, 35].

INCIDENCE OF POSITIVE EGD FINDINGS

ABNORMAL UPPER GASTROINTESTINAL FINDINGS WERE FOUND IN 80% OF GALLSTONE DISEASE PATIENTS WITH ATYPICAL SYMPTOMS IN THIS STUDY. IN THE THYBUSCH SERIES, THE INCIDENCE OF POSITIVE EGD FINDINGS WAS 47.3%, IN THE SCHWENK SERIES, IT WAS 30.2% [36], AND 31% IN THE DIETTRICH SERIES [37].THE HIGHER

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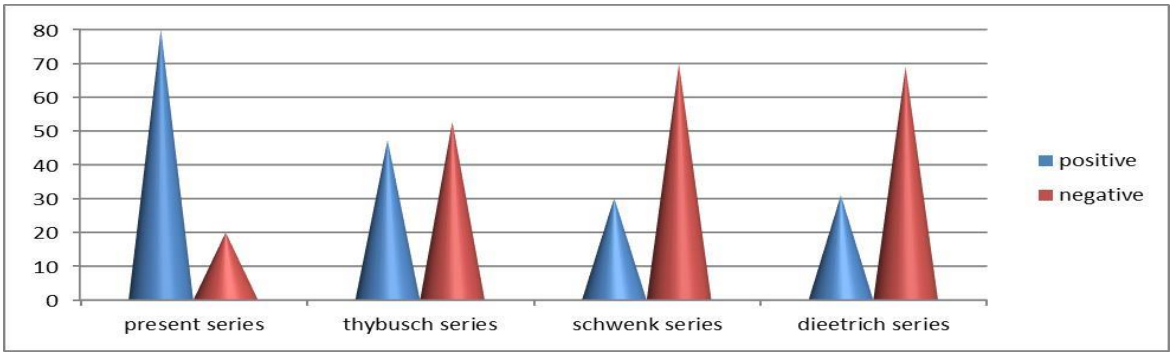
INCIDENCE OF POSITIVE FINDINGS IN THIS STUDY COULD BE LINKED TO THE POPULATION'S SPICY FOOD AND TOBACCO CONSUMPTION HABITS.

EGDFINDINGS	PRESENT SERIES%	THYBUSCH SERIES%	SCHWENK SERIES%	DIETTRICH SERIES%
POSITIVE	80	47.3	30.2	31
NEGATIVE	20	52.7	69.8	69

TABLENO: 7 INCIDENCES OF ENDOSCOPY FINDINGS IN VARIOUS SERIES



GRAPH NO: 4 POSITIVE UPPER GASTROINTESTINAL ENDOSCOPY FINDINGS

ESOPHAGOGASTRO DUODENOSCOPY (EGD) FINDINGS

IN THIS SERIES, 20% HAD NORMAL UGI ENDOSCOPY. GASTRITIS/GASTRIC ULCER WERE MOST COMMON, FOLLOWED BY ESOPHAGITIS, HIATUS HERNIA, DUODENITIS, AND DUODENALULCER. SIMILAR FINDINGS WERE OBSERVED IN OTHER STUDIES, WITH GASTRITIS BEING THE PRIMARY EGD FINDINGS

EGDFINDINGS	PRESENT SERIES%	IBRAHIMSERIES%	BARTOSZSERIES%
NORMAL	20	43.5	29.7
ESOPHAGITIS	37.5	19	8
HIATUSHERNIA	35	9.5	16.1
GASTRITIS/GASTRICULCER	45.8	35.5	43.6
DUODENITIS	6.7	6.5	17.3
DUODENALULCER	7.5	3.5	8.3

TABLENO: 8 INCIDENCESOFVARIOUSENDOSCOPYFINDINGSAMONGVARIOUS SERIES

THECOMPARATIVELY LOWERRATE OF NORMAL UPPERGIENDOSCOPY IN THISSTUDY COULDBE ATTRIBUTED TO PREVALENT HABITS LIKE TOBACCO/GUTKHA USE AND SPICY FOOD CONSUMPTION.

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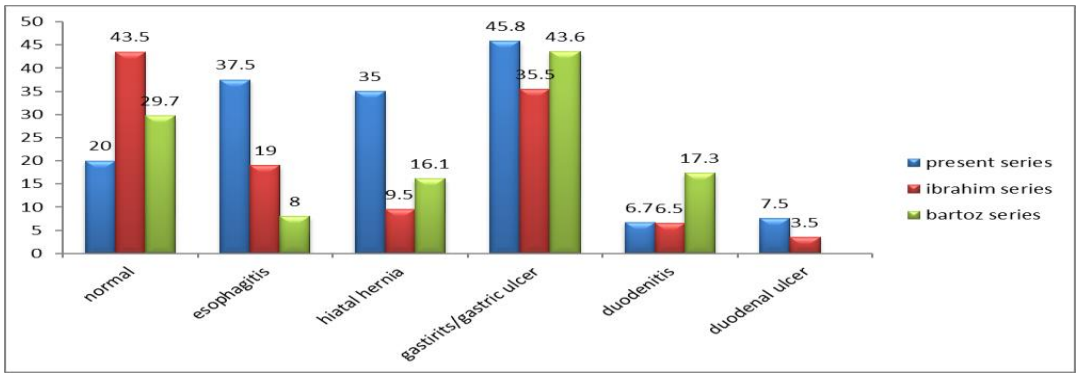

GRAPHNO: 12 INCIDENCESOFVARIOUSENDOSCOPYFINDINGSAMONG VARIOUS SERIES

PREOPERATIVE UPPER GI ENDOSCOPY SHOWS THERAPEUTIC POTENTIAL IN PATIENTS WITH OVERLAPPING UPPER GI SYMPTOMS, IMPACTING MANAGEMENT DECISIONS AND POTENTIALLY REDUCING CHOLECYSTECTOMY RATES.

THE ASSOCIATION BETWEEN CHOLELITHIASIS AND GERD

CORRELATION ANALYSIS REVEALED A MODERATE CORRELATION BETWEEN GERDQ SCORE ANDAGE, SUGGESTING INCREASEDRISKWITHAGE, AND CONSISTENT WITHCHOLELITHIASIS.

Parameter	Test	AGEGROUPS
GERDQSCOREGROUP	PearsonCorrelation	.196*
	Sig.(2-tailed)	0.032
	N	120

parameter	Test	GERDQSCOREGROUP
LOSANGELESGRADING	PearsonCorrelation	.746**
	Sig.(2-tailed)	0
	N	120
HIATUSHERNIA	PearsonCorrelation	.297**
	Sig.(2-tailed)	0.001
	N	120
GASTRITIS_GASTRICULCER	PearsonCorrelation	.375**
	Sig.(2-tailed)	0
	N	120
DUODENITIS	PearsonCorrelation	0.103
	Sig.(2-tailed)	0.263
	N	120
DUODENALULCER	PearsonCorrelation	0.175
	Sig.(2-tailed)	0.056
	N	120

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TABLE NO 9 CORRELATION AND ANALYSIS

ENDOSCOPIC FINDINGS CORRELATED POSITIVELY WITH GERDQ SCORES, PARTICULARLY WITH LOS ANGELES GRADING, INDICATING THE QUESTIONNAIRE'S UTILITY IN DISCERNING GERD FROM BILIARY SYMPTOMS.

HIGHGERDQ SCORES ALONGSIDE SEVERE LA REFLUX ESOPHAGITIS IMPLY GERD AS THE PRIMARYCAUSE, GUIDING EARLYDETECTION AND MANAGEMENT OF ASSOCIATED UPPER GI CONDITIONS, POTENTIALLY REDUCING POSTCHOLECYSTECTOMY SYMPTOMS.

SUMMARY

GALLSTONE DISEASE, INFLUENCED BY AGE, GENDER, ETHNICITY, AND LIFESTYLE, OFTEN PRESENTS WITH DYSPEPTIC SYMPTOMS. INCLUDING THE GERDQ SCORE IN ASSESSMENTS AND PREOPERATIVE UPPER GASTROINTESTINAL ENDOSCOPY CAN IDENTIFY TREATABLE CONDITIONS, POTENTIALLY REDUCING CHOLECYSTECTOMY RATES AND POSTOPERATIVE SYMPTOMS.

CONCLUSION

- **FEMALES AGED 30-60 YEARS COMMONLY PRESENT WITH DYSPEPSIA AND GALLSTONES.**
- **NAUSEA AND VOMITING WERE THE MOST COMMON SYMPTOMS, FOLLOWED BY ABDOMINAL PAIN, HEARTBURN, AND POSTPRANDIAL FULLNESS.**
- **THE GERDQ SCORE EFFECTIVELY SCREENS PATIENTS AND CORRELATES WITH GERD.**
- **GASTRITIS/GASTRIC ULCERS WERE THE MOST COMMON ENDOSCOPIC FINDINGS, FOLLOWED BY HIATUS HERNIA, ESOPHAGITIS, AND DUODENITIS.**
- **PATIENTS WITH HIGH GERDQ SCORES AND SIGNIFICANT UPPER GI FINDINGS SHOULD INITIALLY RECEIVE MEDICAL MANAGEMENT.**
- **ROUTINE PRE OPERATIVE UPPER GI ENDOSCOPY IS ADVISED FOR DYSPEPTIC GALL STONE PATIENTS TO PREVENT UNNECESSARY CHOLECYSTECTOMY.**

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To be an author, a person must have made substantive contributions to the study by fulfilling at least 3 of the criteria presentedin the following table.

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TYPE OF CONTRIBUTION	DESCRIPTION	CONTRIBUTORS
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DESIGN	Planning methodology to reach the conclusion	Dr.E GANESH REDDY , V.VIJAYA LAKSHMI DR SWATHI CHIGICHERLA, DR B.UJJANESWARI
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