

# Overuse of Acid Suppression Therapy in Hospitalized Patient

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চট্টগ্রাম মেডিকেল কলেজ হাসপাতাল  
C.M.C.H.

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ফোন : ১১০০ ৯৫  
স্বাস্থ্য সেবা : ১১০০ ৯৬

# Background

- Acid suppression therapy (AST) is commonly prescribed therapy
- Its minimum side effects and easy availability (OTC) inspire physicians to prescribe it frequently prophylactically as well as routinely in almost all cases of abdominal pain.
- This significantly increases cost of treatment as well as subjects patients to increased risk of drug interactions.
- Data is limited in our settings regarding the frequencies of AST overuse in hospitalized patients.

# AIM

- To determine the proportion of AST overuse in hospitalized patients of Medicine and Nephrology departments of CMCH.

# Materials and Methods

- Descriptive cross sectional study
- Time period- May 2009 to October 2010
- Place of study- Medicine(3 units) and Nephrology department of CMCH,
- Inclusion criteria-Who take PPI or H2 blockers irrespective of Endoscopy and gave written consents for enrollments were included.
- The patients taking AST before admission were excluded.

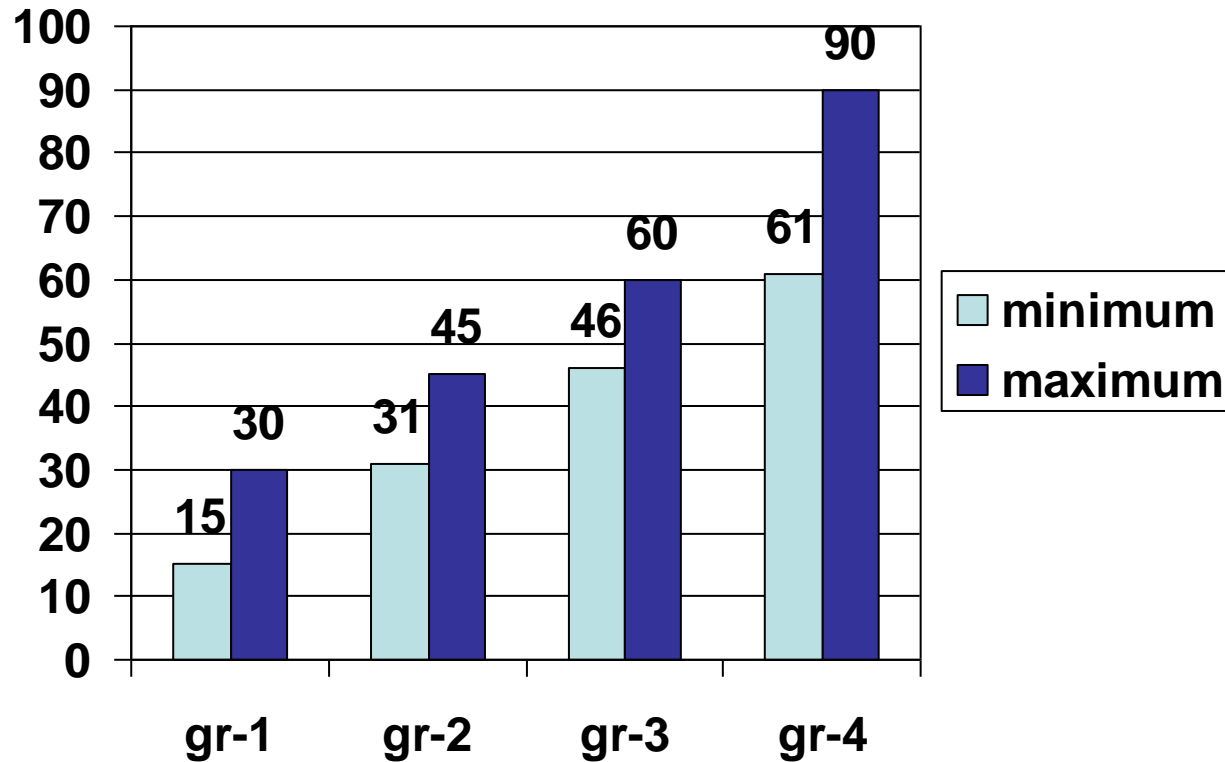
# Materials and methods cont....

- Structured Case record forms were prepared containing demographic variables (age and sex), Steroid and NSAID uses, Smoking Habit, Primary diagnosis, Types of AST therapy and endoscopic findings.
- Sampling was purposive.

# Results

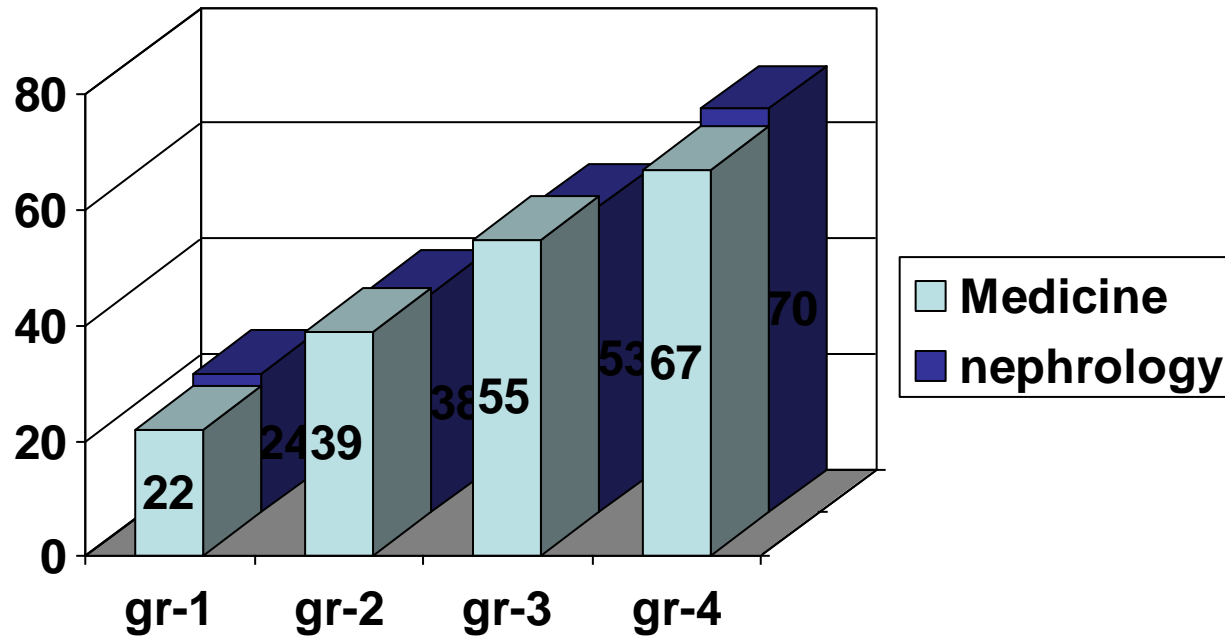
- Total no of patients : 622
  - Medicine : 524
  - Nephrology : 98

# Grouping according to age

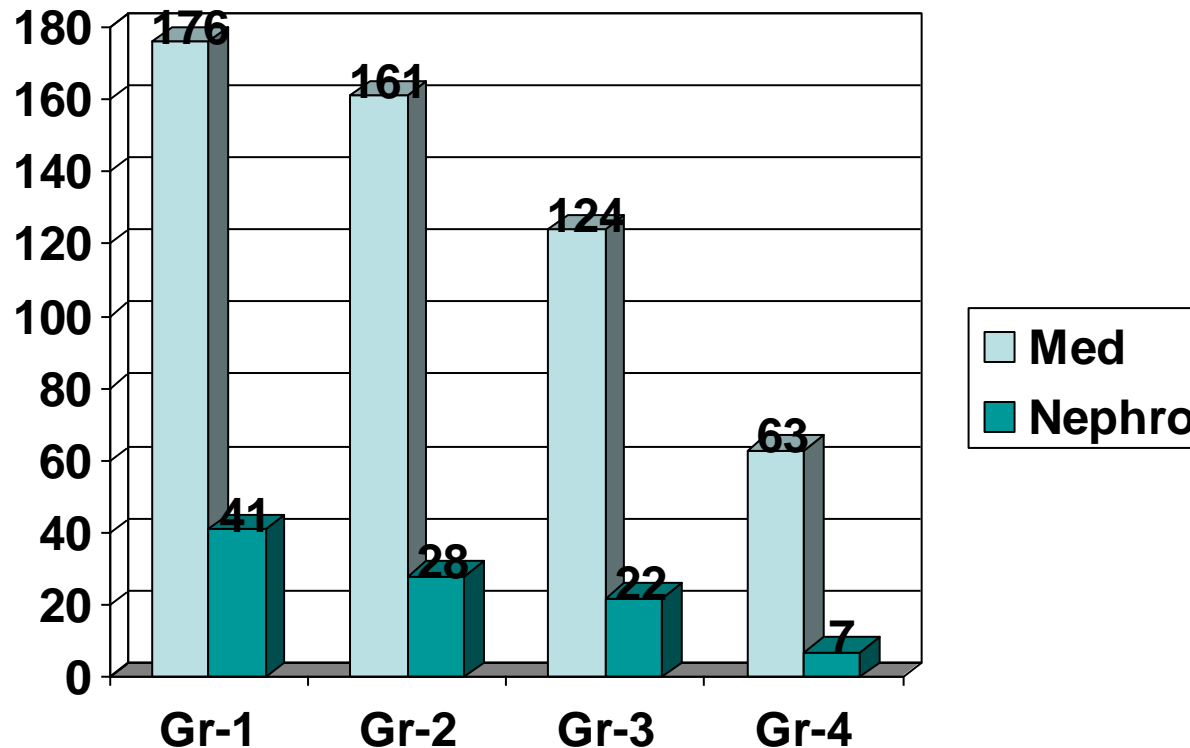




# Mean age of different groups

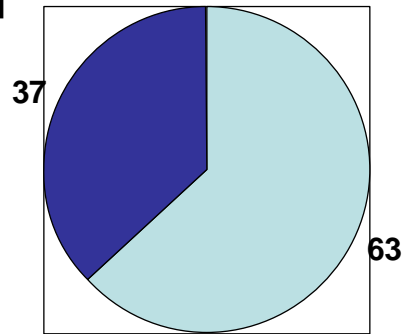


# Number of patients in different groups (N:Med=524;Neph=98)

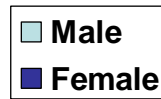


# Male: Female ratio (N: Med=524;Neph=98)

[194]

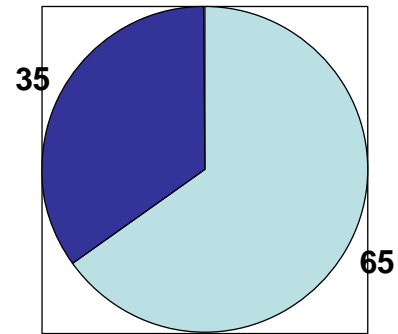


[330]

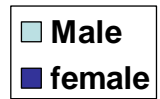


Medicine

[34]

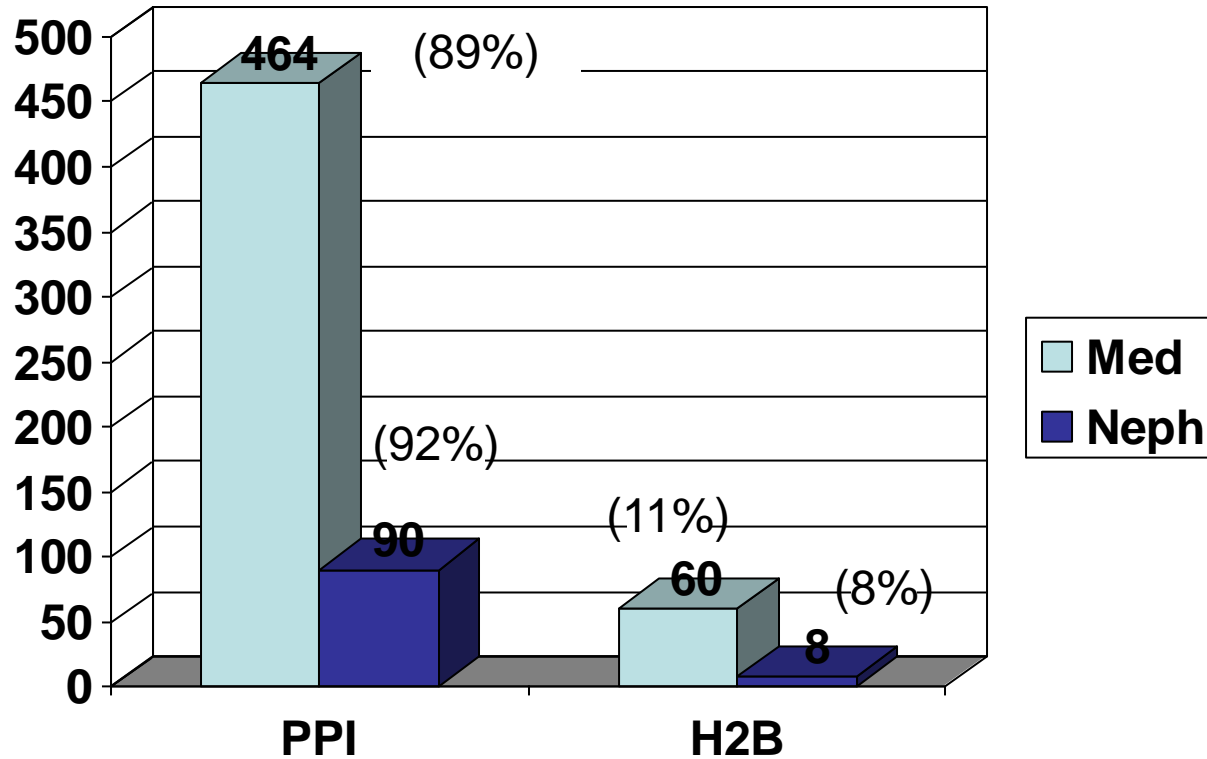


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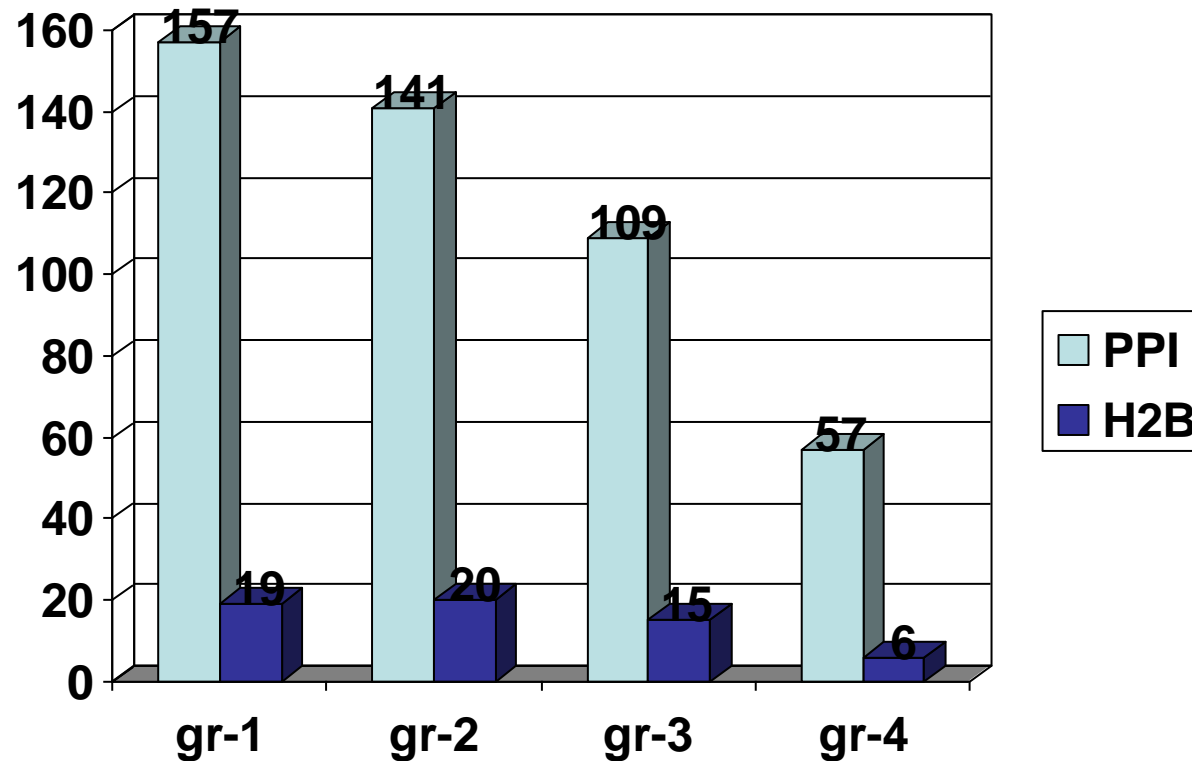


Nephrology

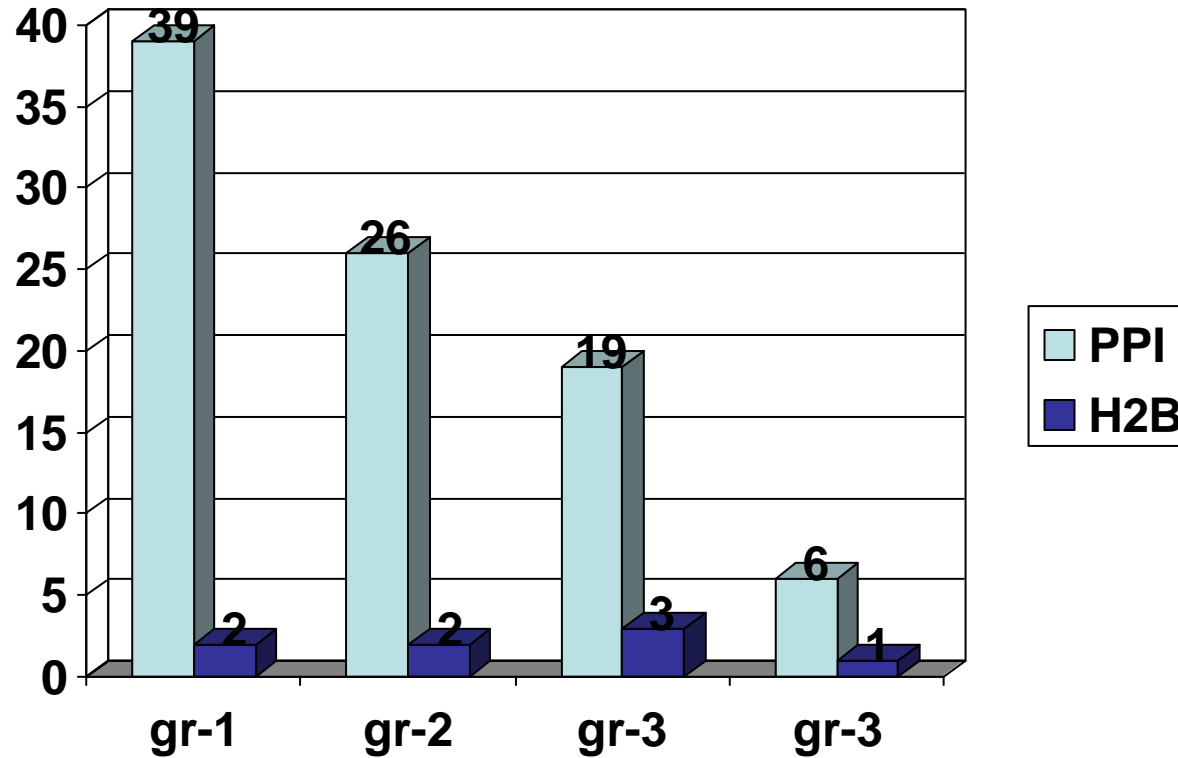
# PPI, H2B, (N: Med=524;Neph=98)



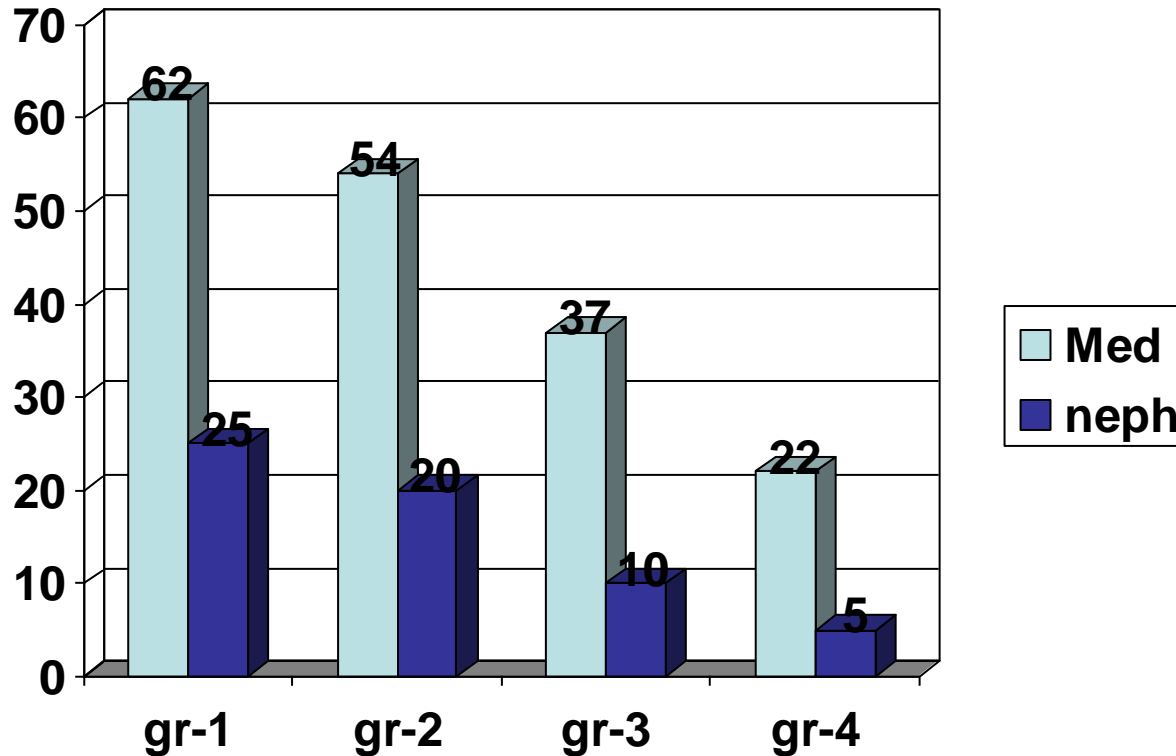
# PPI vs H2B ( medicine) (N=524)



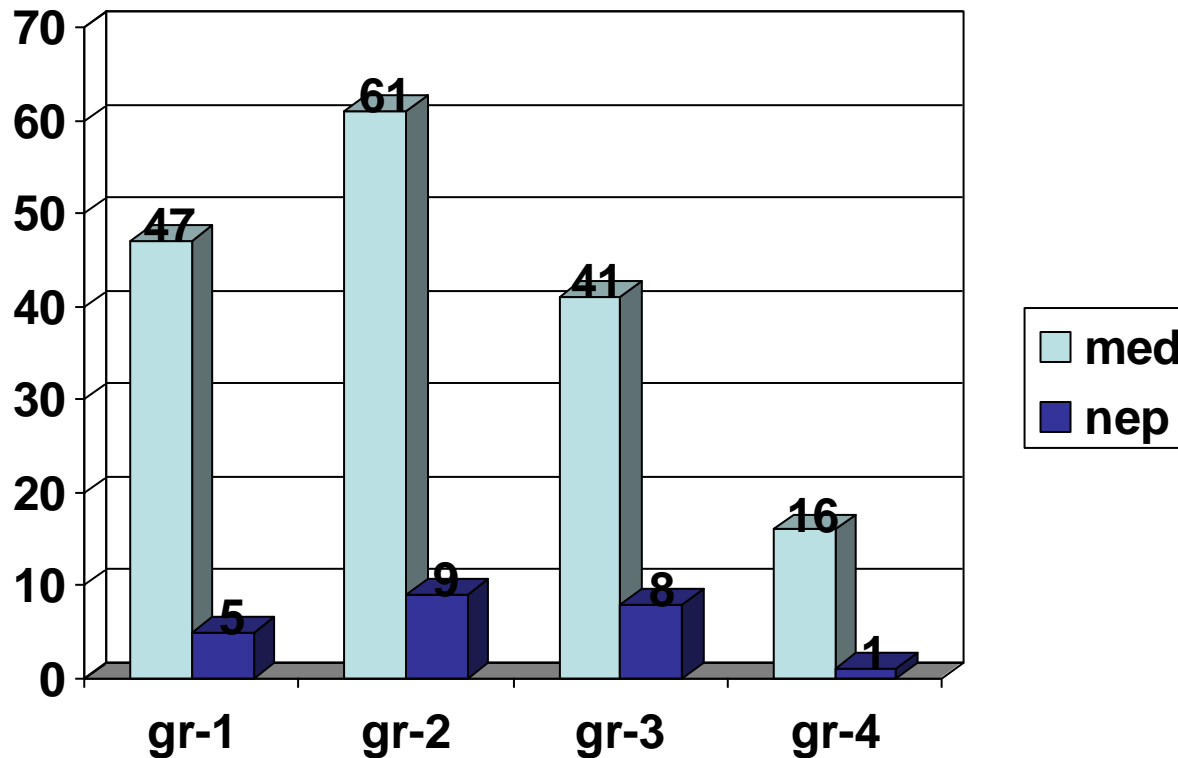
# PPI vs H2B ( nephrology) (N=98)



Normal endoscopy- (Med:175(51.5%), Neph:60(72%))  
(Total no of endoscopy done  
Med=340,Neph=83)

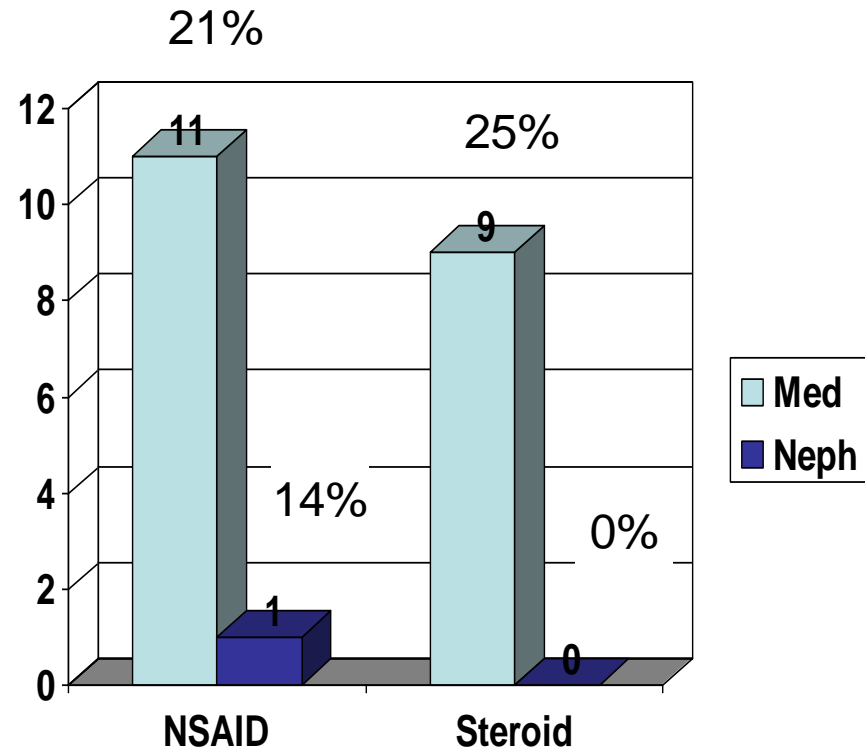
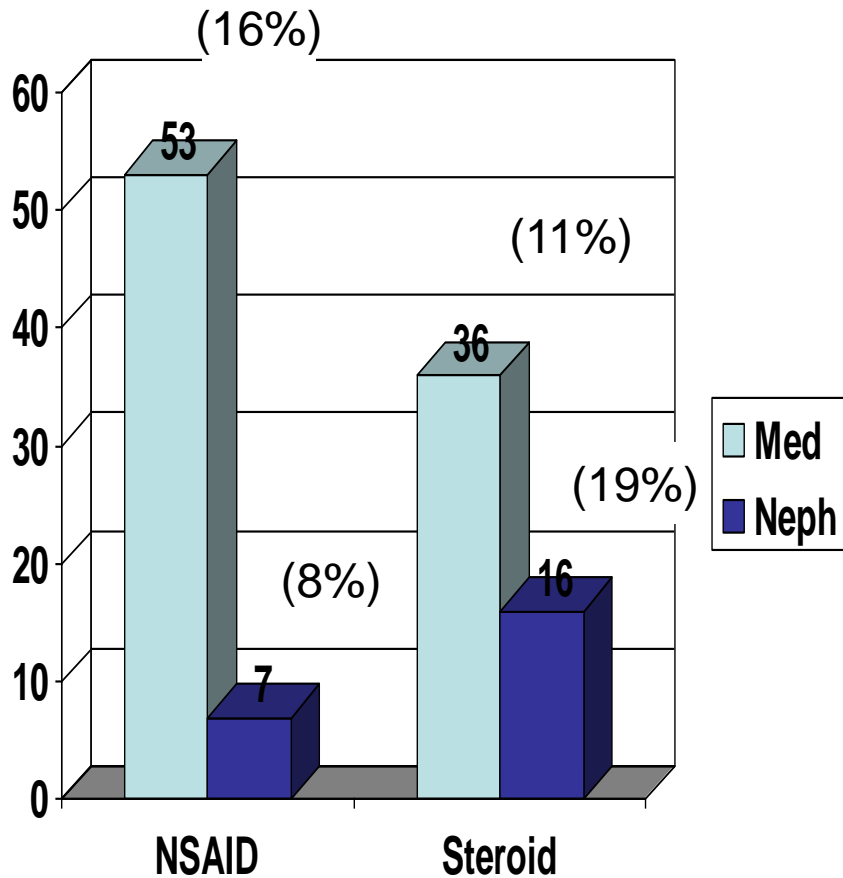


Abnormal endoscopy (Med:165(48.5%), Neph:23(28%))  
(Total no of endoscopy done: Med=340,Neph=83)



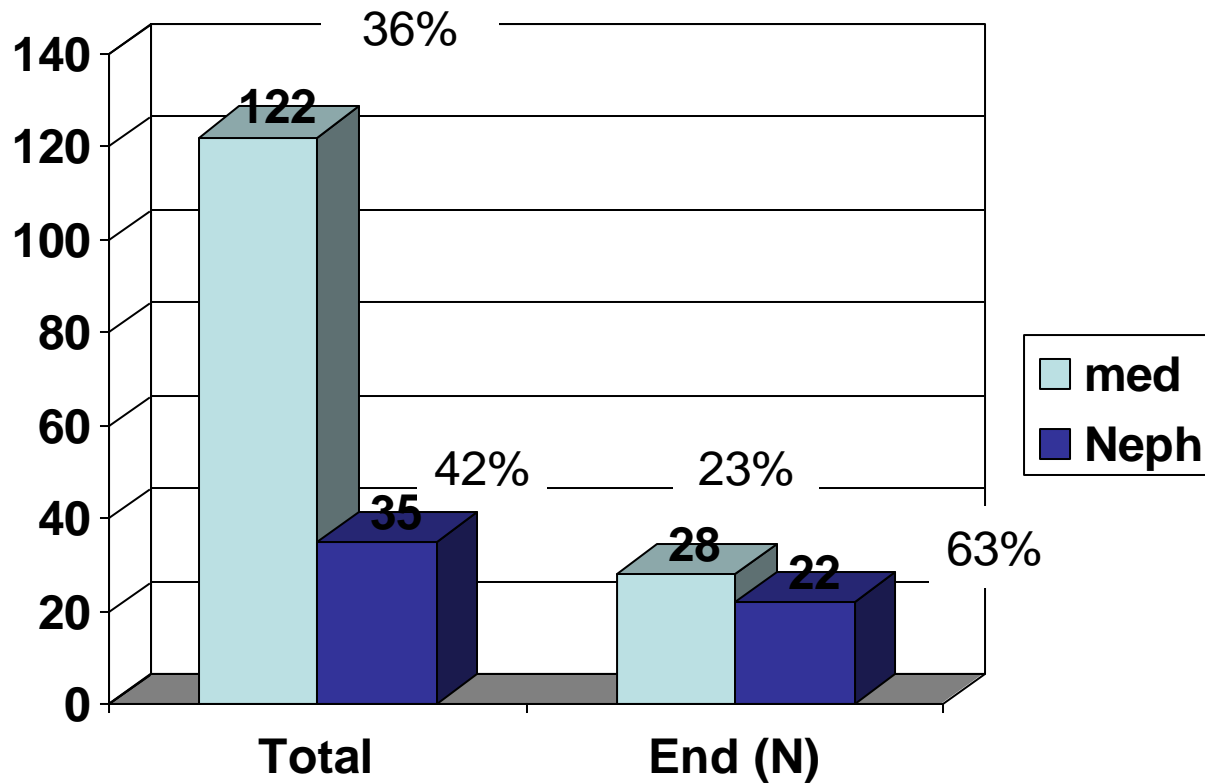


# NSAID and Steroid Use (N: Med=340;Neph=83)



Normal endoscopy

# Smoking(No:Med-340,Neph-83)



## Abnormal Endoscopic findings (Medicine) (N=165)

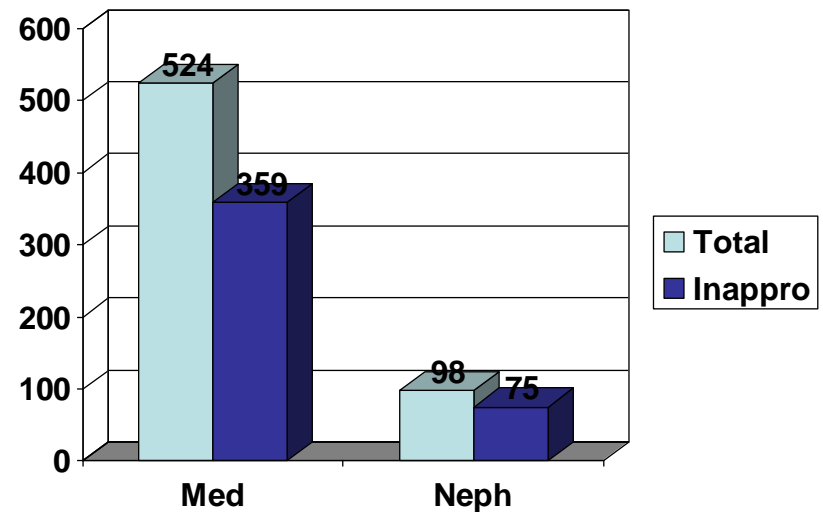
Endoscopic findings	No	Percentage
Eos Varix	51	31
Esophagitis	09	05
GORD	10	06
Ca-esophagus	02	01
Gastritis	25	15
GU	15	09
Ca- stomach	07	04
Cong. Gastropathy	03	02
DU	25	15
Duodenitis	07	04
Round worm	11	07

# Abnormal Endoscopic findings( Nephrology) ( N-23)

Endoscopic findings	No	Percentage
Eos Varix	0	0
Esophagitis	02	09
GORD	04	17
Ca-esophagus	0	0
Gastritis	02	09
GU	02	09
Ca- stomach	0	0
Hiatus hernia	01	04
DU	09	39
Dudenitis	01	04
Round worm	02	09

# Inappropriate Use of AST

Department	Total no of patients	Endoscopy not done NO(%)	Endoscopy normal NO(%)	Inappropriate use of AST NO(%)
Medicine	524	184(35.1)	175(33.4)	359 (68.5)
Nephrology	98	15(15.3)	60 (61.2)	75(76.5)



# Discussions

- The preoccupied idea that AST lacks drug interaction leads to its overuse.
- Around 70% of our patients were inappropriately using AST
- Around 35% in medicine and 15% in nephrology were prescribed AST without doing Endoscopy.

# Discussion contd.....

- Subgroup analysis showed there is ~08-19% indications of AST for steroid and NSAID prophylaxis.
- Though drug interactions are not significant but increased risk of infection by *Clostridium difficile*, MRSA and Vancomycin resistant *Enterococcus* were observed when on AST , particularly on PPI.

# Discussion contd.....

- Singapore researchers showed AST is 2<sup>nd</sup> of the top 10 drugs prescribed in hospitalized patients.
- Over prescription of AST occurred in 22-68% of patient population in other literatures.
- Our results are almost similar to existing data.



# Limitations

- Single institution
- Not all disciplines
- Small sample sized considering total patient load.
- Logistic regression analysis was not done to see contribution of different factors.
- Doctors interview was not available regarding use of AST in patients with normal endoscopy and prophylactic use of AST with out doing endoscopy.

# Conclusion

- AST is frequently over prescribed in hospitalized patient.
- It leads to increased expenditure and side effects of drug and increased risk of infections.
- Hospital Based guidelines may decrease this overuse.

**Thank you**