

Prevalence of Acid Peptic Disease in Young Doctors and its Major Causes

Aden Khalid Shah¹, Syeda Maryam Hussain² and Zainab Zafar³

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Disease in Young
Doctors

ABSTRACT

Objective: To determine the prevalence of Acid Peptic Disease in young doctors and its relationship with dietary habits, nature of duty and workload.

Study Design: Analytical / cross sectional study.

Place and Duration of Study: This study was conducted at the Department of Medicine, Lahore General Hospital, Lahore from December 2017 to February 2018.

Materials and Methods: Questionnaire based study from a random sample of 100 doctors working in different teaching hospitals of Lahore. In this study, a sample of 100 doctors was taken from government hospitals of Lahore. This sample included male and female doctors with ages ranging from 25 -40 years, and included House Officers, Postgraduate Residents and Medical Officers.

Results: Of the 100 doctors interviewed, 67% had suffered from APD at some stage during their professional life. Of these, 35% started having APD during M.B.B.S. whereas 16% during House job. The doctors with duty hours of more than 50 hours per week had increased incidence of APD as compared to the doctors who clocked lesser work hours. 51% of doctors consumed fast food during duties, 60% had weight gain during professional life and 78% consumed beverages like coffee and tea. 55% doctors suffered from symptoms of APD during emergency duty. Among those who suffered from APD, 20.4% also used anxiolytic medication.

Conclusion: APD is very common among young doctors and can be prevented by reducing working hours which will directly lead to stress reduction and in turn APD. The risk of APD is directly and proportionately linked to more working hours and lack of balanced diet among doctors.

Key Words: Acid Peptic Disease, Heartburn, Young Doctors, Peptic Ulcer Disease

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INTRODUCTION

Medicine is one of the most prestigious professions in our country. Medical students are selected after undergoing rigorous examinations. After which they go through a tough period of studies spanning five years. They then begin training as House Officers, and then Postgraduate Trainees. The stressful nature of the job along with prolonged working hours creates an environment fraught with stress for the doctors. Leading to health issues in doctors such as, depression¹, anxiety², suicide ideation, acid peptic disease³, irritable bowel syndrome⁴ and migraine.⁵

Acid peptic disease is a group of symptoms that are a result of distinctive yet overlapping mechanisms that decrease stomach mucosal defense and increase the production of acidic gastric juice, resulting in mucosal damage.

¹. Department of Medicine, District Head Quarter Hospital, Kasur.

². Rural Health Centre, Rehanwala, Nankana Sahib.

³. Department of Plastic Surgery Department, Mayo Hospital, Lahore.

Correspondence: Dr. Zainab Zafar, Medical Officer, Plastic Surgery Department, Mayo Hospital, Lahore
Contact No: 0322-8466446
Email: maryamshah991@gmail.com

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This is characterized by a sensation of burning in epigastrium⁶, indigestion and abdominal discomfort. This has an effect on quality of a doctor's life as well as as patient care and management. Leading to significant patient morbidity and mortality⁷. A study held in US states that approximately 42% adults suffer from heartburn at some point⁸.

Based on the observation that gastrointestinal disorders are quite common among doctors⁹, a study on Acid Peptic disease in doctors and its relationship with its various risk factors is imperative. House Officers and postgraduate trainees have tough working schedules in government hospitals. Their duties include emergency duties and ward calls which are on average 12 to 30 hours in duration. With the average work week being 60-80 hours long. The population of Lahore is 11,126,285 total, and population density is 20,205/km² by 2017 Census of Pakistan, whereas 16 public sector hospitals are functioning in it.

Therefore there is a huge load of patients in emergencies of Government hospitals of Lahore. In addition, since Lahore has tertiary care hospitals with the best facilities, all the referrals from the surrounding districts are made here. This leads to an overwhelming number of patients in the Emergencies and Wards. During duties a doctor faces mental as well as physical stress. Mental stress or anxiety can lead to APD¹⁰. Most of the doctors we interviewed complained of body aches occurring, for which they resort to the use of

analgesics, which are a known cause of acid peptic disease.^{11,12}

There is a large patient load in tertiary teaching hospitals and not enough doctors to cope with the load, doctors don't find time to consume proper food during duty hours. They often resort to Fast food which has high fat content and large quantities of saturated fat and carbohydrates. Consumption of unhealthy food and inability to exercise due to lack of time leads to a significant weight gain in doctors¹³, which is also an identified risk factor for development of acid peptic disease and GERD¹⁴.

Most doctors consume coffee, tea, green tea or energy drinks, and smoke cigarettes to stay alert during prolonged duties. All of these habits lead to APD according to multiple researches done in the past¹⁵. Long duty hours, stress, unhealthy diet, energy drinks, beverages and smoking are prevalent among doctors during their training period. Medical Officers have lesser duty hours than house officers and postgraduate trainees and so is the incidence of stress related APD among Medical officers who work 6-8 hours per day.

According to a retrospective research held in UK, based on study of patients who were newly started on low dose aspirin to prevent cardiovascular events, NSAIDs, oral steroids, tobacco, stress, depression, previous history, anemia and social deprivation were identified as risk factors for PUD¹⁶. This supports our study as most of these risk factors can be found in excess in the doctor community as compared to the general population.

MATERIALS AND METHODS

A cross sectional, comparative study was conducted at the Department of Medicine, Lahore General Hospital, Lahore from December 2017 to February 2018.

It was conducted on young doctors working in Government Hospitals of Lahore. These doctors included House Officers, Postgraduate Trainees, Medical Officers and Consultants. A sample of 100 doctors was taken, including males (43) and females (56). This study was conducted over a time period of 3 months. Doctors who were suffering from acid peptic disease as well as those who did not report any such symptoms. This helped identify the risk factors for acid related gastrointestinal diseases that are generally present in the doctor community.

Specialty

Frequency	Percent	Valid Percent	Cumulative Percent
Medicine	12	12.0	12.0
Medicine Allied	10	10.0	10.0
Surgery	2	2.0	2.0
Surgery Allied	27	27.0	27.0
MO, WMO	49	49.0	49.0
Total	100	100.0	100.0

49 doctors were Working as MOs or WMOs in Government setups whereas 51 were working as Post Graduate Residents; 12 doctors were in General Medicine, 10 in Medicine and Allied, 2 in General Surgery whereas 27 were in Surgery and Allied. Sample population included doctors aged 25 to 40. SPSS Statistics Data Editor was used to analyze the data.

RESULTS

Out of 100 doctors who were included in this study, 67% reported to suffer from APD, while 33% had never faced any symptoms of APD during their life time.

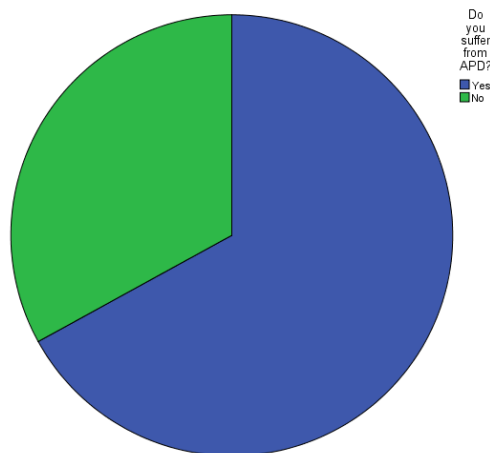


Figure No.1: Graph about suffering from ADP

(41% of doctors use medication to relieve their symptoms including PPIs and antacids).

Among those who had APD, 12% suffered from APD daily, 33% suffered from APD often and 55% suffered sometimes.

35% of them started having symptoms during M.B.B.S. whereas 16% had them since House Job. A small number (6%) had APD before joining Medical College. Work hours had a significant relationship with acid peptic disease. There was a spike of APD patients in the doctors who were working 60 hours or more. Out of 11 doctors who worked >70 hours per week, 10 (91%) suffered from APD whereas 1 (9%) did not. 27 doctors worked from 61 to 70 hours per week, out of these 27, 19 (70%) suffered from APD whereas 8 (30%) did not.

Do you suffer from APD? * How many hours do you work per week?

Table No.1: Count

Do you suffer from APD?	How many hours do you work per week?						Total
	20-30	31-40	41-50	51-60	61-70	>70	
Yes	2	15	12	8	25	10	72
No	2	13	9	1	2	1	28
Total	4	28	21	9	27	11	100
%age	50%	53.5%	57.1%	88%	92.5%	90.9%	72%

9 doctors worked from 51 to 60 hours per week; out of these, 8 (88%) suffered from APD while 1 (12%) did not. 57% of the doctors working from 41 to 50 hours per week and 54% of the doctors working from 31 to 40 hours per week were suffering from APD. Which substantiates that more the working hours, more is the incidence of APD in doctors.

Majority of the doctors suffered from symptoms of APD during emergency duty.55% doctors suffered from APD symptoms during emergency duty,24% during ward calls, 6% during OPD duty whereas 16% population symptoms were unrelated to duty.

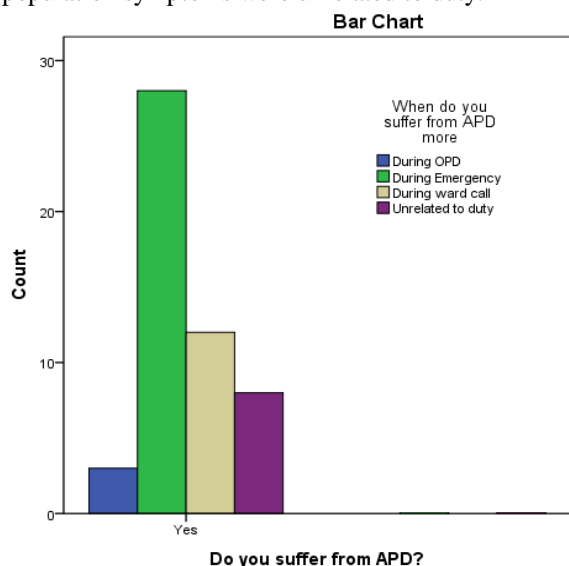


Figure No.2: Bar graph – suffering from ADP

51% of the doctors consumed fast food during their duties whereas 9%, 21% and 18% consumed Chinese, continental food and fruits and salads respectively. No significant relationship with amount of fruits and salads consumption was seen.

60% doctors suffered reported weight gain during professional life .Among those who gained weight, 65% suffered from APD, whereas among those who didn't gain weight, 67% suffered from APD. According to this, both the doctors who gained weight and those who didn't suffered almost equally from APD. No significant relationship was established between weight gain and APD in doctors in our research.

Table No.2: Details of suffering from ADP

Do you suffer from APD?	Have you suffered from any weight gain during professional life?		Total
	Yes	No	
Yes	39	24	63
No	21	12	33
Total	60	36	96

Tea, coffee and green teas are known to cause burning epigastrum as well as PUD. Out of 100 doctors who were interviewed, 78 regularly consumed coffee, tea or green tea to stay alert. Out of these 78, 63 (80.8%) consumed tea, 9 (11.5%) consumed coffee and 5 (6.4%)

consumed green tea.69% of the doctors who consumed tea had APD, 67% of those who consumed coffee, while 60% of those who consumed green tea had APD. Among these, 60% of the doctors who consumed 1 cup daily, 67% of the doctors who consumed 2 cups daily, 70% of those who consumed 3 cups daily, 89% of those who consumed 4 cups daily, 75% of those who consumed 5 cups daily was seen.

Smoking was found to have a positive relationship with APD. Among these 78 doctors, 11 doctors (14.1%) were smokers while 67 (85.9%) were non-smokers. 64% of smokers had APD while 70% of non-smokers had APD.

Table No.3: Count

Do you suffer from APD?	Do you smoke?		Total
	Yes	No	
Yes	7	47	54
No	4	20	24
Total	11	67	78

To assess the relationship of stress with APD in doctors we also asked them whether or not they used any anti-depressants/ anxiolytics. According to our study, 20.4% doctors suffering from APD used anxiolytics/ antidepressants while 14.3% of those who never had APD took these medications. Since there was a difference of 6.1% between these values, it shows that there is some relationship of mental health and APD, and further researches should be carried out on this. However there are some researches that support our result.¹⁷

DISCUSSION

According to this study a massive percentage, i.e. 67% of doctors have suffered from APD at some stage in their professional lives¹⁸. Most of these doctors developed symptoms of APD during M.B.B.S. (35%), whereas 16% developed it during house job. This can be attributed to stress and over work during this time period. This is also supported by the fact that 55% doctors reported to have suffered from APD during Emergency duty. Emergency duty is tough in terms of physical and mental stress of not only treating a large number of critical and an even larger number of completely stable patients. Although the patient load is no less in OPDs of government hospitals of Lahore, there are no critical patients, the hours and nature of work less stressful.

Food is provided to the patients in Hospitals. However, no such system exists for doctors who are working for 12 -24 hour or even longer shifts. As a result, most doctors order fast food which is one of the major culprits of APD.

CONCLUSION

Doctors are the cream and pride of our nation. They save many lives in their careers. However, while

ameliorating the sufferings of others, they suffer from health issues themselves. Many doctors develop symptoms of acid peptic disease after starting their journey towards becoming a doctor, or after becoming one. Upon studying the causes and risk factors of APD in young doctors through this study, it was concluded that most of the risk factors for this Gastro intestinal disease are preventable. Working Hours for trainee doctors should be fixed and should not exceed a certain fixed limit. Emergency, OPD and ward duties should be rotated among Medical Officers and Post graduate residents in public sector hospitals to avoid effects of continuous stressful duties. Long duties and calls should be avoided and instead should be divided in shifts. Food should be provided through a proper mess system in public sector hospitals to the doctors who are doing long duties in ward or Emergency.

Recommendations: there was a direct relationship between the amount of hours a doctor spent at work and incidence of Acid Peptic Disease. It is imperative that a cap be put on doctors' working hours per week to a maximum of 48 hours/week with duties and calls longer than 8 hours per shift being abolished. More Medical Officers to be hired in Government Hospitals and the number of seats for post graduate residents under Central Induction Policy be increased. This way doctors can give their optimum work output without patient care being compromised. As a doctor having a sick body and a tired mind cannot deliver quality healthcare.

Author's Contribution:

Concept & Design of Study: Aden Khalid Shah
 Drafting: Syeda Marium Hussain
 Data Analysis: Zainab Zafar
 Revisiting Critically: Aden Khalid Shah,
 Syeda Marium Hussain
 Final Approval of version: Aden Khalid Shah

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