
REVIEW**A Ten Year Review of Diseases in Rural Areas in Rural Konkan.***Suvarna N. Patil**Medical Director,**BKL Walawalkar Rural Medical College and Hospital, Savarde. Maharashtra, India.*

Abstract:

An analysis of 11,984 cases admitted in an intensive care unit or general ward under general medicine department over a period of 10 years (2003 to 2013) at a rural secondary care Hospital, Dervan in Ratnagiri district was performed. Out of these 7670 (64%) were males and 4314 (36%) were females. 7294 patients got admitted in Intensive Care Unit (60.86%) and 4690 (39.13%) were admitted in wards.

Analysis showed that largest group of patients had cardio vascular system related problems 3831 (31.96%), followed by 2559 (21.35%) having central nervous system related problems, Respiratory diseases 1402 (11.69%), infections 993 (8.28%), gastro intestinal 985 (8.21%), diabetes 804 (6.70%), renal disorders 517(4.31%), poisoning 296 (2.46 %), snake bites 288 (2.40%,) and scorpion bites 309 (2.57 %). Cardio vascular disease form a sizable majority of non communicable medical illness .This analysis indicates that the prevalence of coronary artery disease is increasing in rural India and there is an urgent need for development and implementation of accessible and approachable primary and secondary prevention and treatment approach for control of this epidemic. It also indicates that there is a need for development of nephrological services in rural area. Snake and scorpion bites were the diseases prevalent in this area, but mortality was lowest in this group because of good ICU back up.

Overall mortality in 11984 patients was 6.14%. Highest mortality was seen in renal disorders that are 8.12%, in spite of having hemodialysis facility.

Introduction:

This paper discusses a need for secondary level hospitals in rural India. In rural India there is severe shortage of ICU's for effective critical care. Because of lack of knowledge, poverty, illiteracy, low socioeconomic status, patients present very late to the hospitals and delayed presentations reduce the chance of survival. It also increases the economical burden on them. Most of the primary health centers and government hospitals in rural areas lack the facilities which are required to treat critically ill patients. So in this paper we have studied the disease pattern of the patient admitted to the hospital under general medicine department. We categorize the patients according to the final diagnosis, they were classified system wise. Overall mortality and system wise mortality was noted. This shows that burden of CAD is increasing and it is equal to urban areas. Different class of disease conditions like snake and scorpion bite were identified which were prevalent in this areas.

Aim:

To Study the pattern of various medical diseases seen during specialist medical rural practice.

Materials and Methods:

We have done retrospective analysis of 11,984 patients from their case paper records between December 2003 to December 2013. According

to the severity of the disease condition patients were admitted in either wards or ICUs. Patients were classified into coronary artery disease, respiratory, Central Nervous System CNS, Poisoning, renal disorders, Diabetes Mellitus DM, Infectious disease, snake bites and scorpion stings. System wise mortality was studied. Patients were provided with the facilities like ICU, multipara monitors, ventilators, Arterial Blood Gas analysers, temporary pace makers, haemodialysis, CT scanner, Ultrasound, 2 D echoes, pathology lab and blood bank.

Results:

Data of 11,984 patients were analyzed. Out of these 7670 patients were male (64%) and 4314 (36%) patients were females.

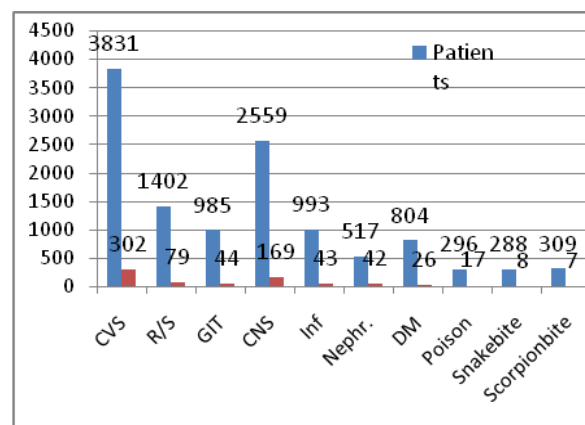
System wise classification was done from the final diagnosis written on the case paper. They were classified in following systems.

1) Cardio vascular system (3831 patients), 2) Respiratory system (1402), 3) Gastro intestinal system (985), 4) Renal disorders (517), 5) Diabetes Mellitus (804), 6) Infections (993), 7) Poisoning (296), 8) Central Nervous System (2559), 9) Snake bite (288), 10) Scorpion stings (309). Thus percentage wise the highest morbidity was for CVS (31.96%), followed by CNS (21.35%), Respiratory system (11.69%), Infections (8.28%), GIT (8.21%), DM (6.70%), Renal disorders (4.31%), Poisoning (2.46%), Scorpion stings (2.57%) and Snake bite (2.40%) in that order. Out of 11,984 patients 737 patients expired thus mortality was 6.14 %.

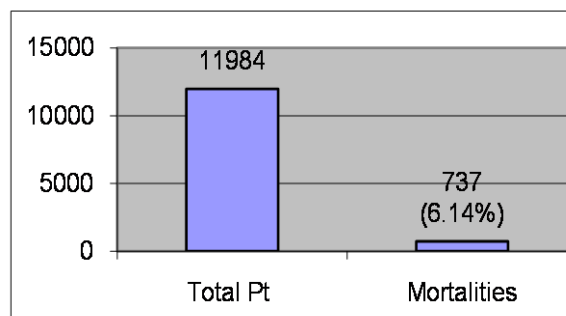
Cardiovascular diseases mortality was found to be 7.88%, Respiratory was 5.63%, CNS (6.6%), GIT (4.46%), Infections (4.33%), Renal diseases (8.12%), DM (3.24%), Poisoning (5.74%), Snake bite is 2.77% and scorpion sting was 2.66%

Out of 11984 patients, 7294 i.e.60.86 % patients were admitted in ICU in critical condition and 4690 i.e.39.15% were admitted in wards.

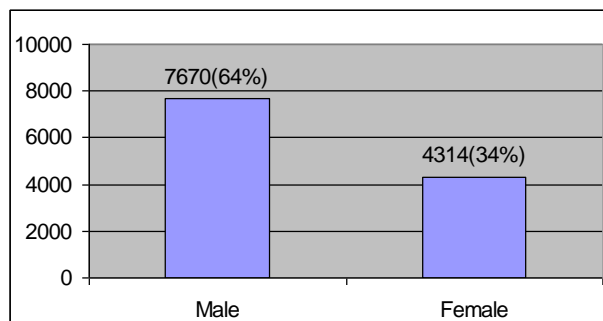
(Graph 1): System wise classification.



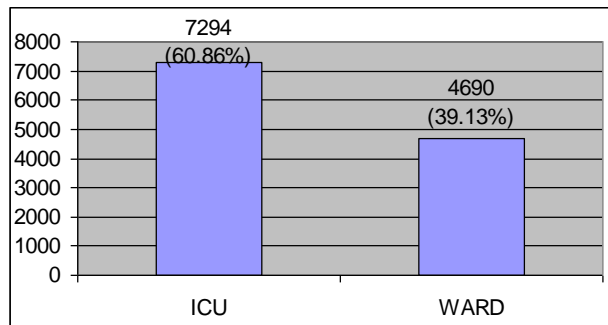
(Graph 2): Overall mortality



(Graph 4): Gender wise classification.



(Graph 5): ICU and Ward wise admission analysis



It is evident from the tables that coronary artery disease patients constitute highest percentage. Snake and scorpion sting conditions though constitute smaller group of patients, these are prevalent conditions of this area and one of the reason of mortality in rural population.

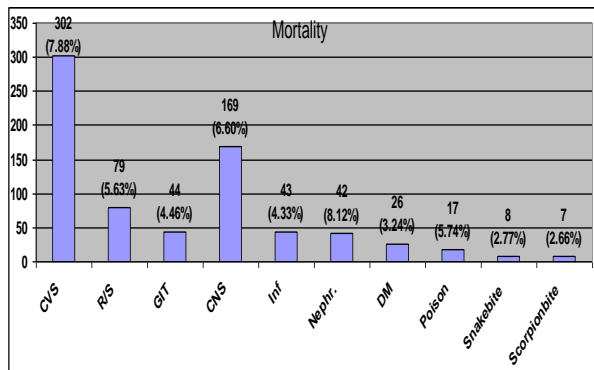
Discussion:

Most of our countries population lives in rural areas and most of the rural people are devoid of basic necessities of life like food, water and shelter. Health is not priority at all. They are caught in the vicious cycle of poverty and illiteracy and in Kokan they are dependent on money order economy. Most of people in our country suffer from twins scourge of large population with rest numbers living in dire poverty and subhuman living conditions. Most of the population lives below the poverty line which leads to neglecting of health and most of the disease are considered physiological.

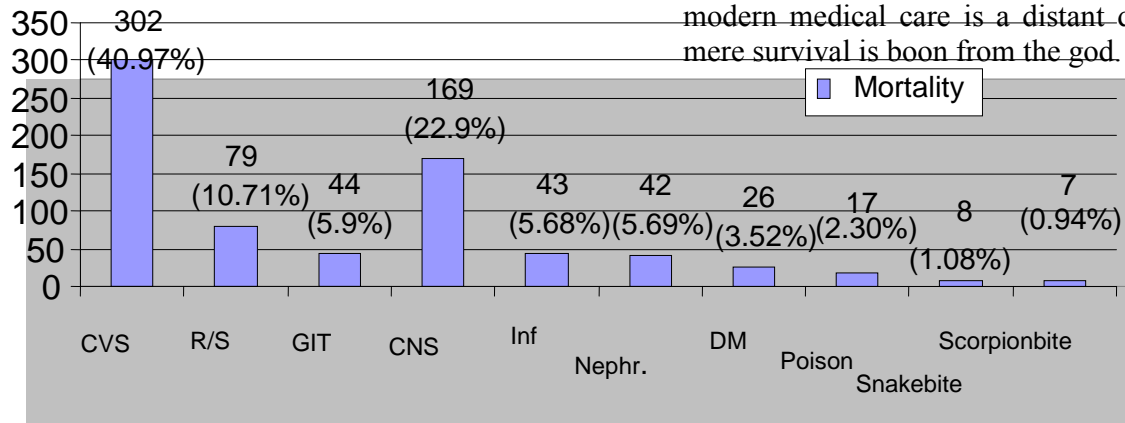
Other prevalent disadvantages are complexity of living into deep interiors of country side. Where means of transport are not existent, health care centers are far away, modern medical care is a distant dream, and mere survival is boon from the god.

(Graph 3): System wise mortality

(Graph 3): System wise mortality



Graph 6): System wise Contribution to Overall Mortality Out of 737 Deaths



Villagers are often confused as to where to seek medical relief even if convinced of its effectiveness due to illiteracy, ignorant of the miracles which modern medicine can perform, suspicious of new experiments to be conducted by strangers and misguided by the indigenous quacks. All these factors leads to limited attention to health and they thus land up in complicated health problems and invariably get admitted in ICUs. In our study 60.86 % patients got admitted in ICU as they were in critical condition. Unfortunately there is a shortage of secondary and tertiary care level hospitals in rural areas, so these patients have no option than to die.

Percentage of patients getting admitted in ICU was 60.86% i.e. higher than patients admitted in wards because diseases are considered physiological and there is delay in diagnosis and seeking medical help due to poor economic status, illiteracy and difficult geographic terrain with no means of transport.

Percentage of males getting admitted to the hospital is more than female patients may be because it is a male dominant community which gives importance to males in the families with least priority to females in Konkan region.

In our study 31.96% patients had CAD. This shows that prevalence of CAD is significant in rural areas. Indian studies indicate that coronary risk factor and coronary artery prevalence are higher among wealthy communities¹⁻⁶

Surrotham & Berry (1) reported that CAD was more prevalent among high income group without giving any explanation. Other workers emphasized that people engaged in physically demanding work such as farming were less likely to develop CAD than people with sedentary occupation²⁻³.

Raman Kutty et al. from south Indian suburban village reported that coronary disease

prevalence was highest in higher socioeconomic group⁶. This indicates that detailed study is required to understand the risk factors of CAD in rural Indian population. Chronic kidney disease is major health problem for the under developed countries of south east Asia⁷

True incidence & prevalence in the region is not known but the estimate suggests that prevalence may be more than that reported in western societies. The looming epidemic of diabetes and hypertension is likely to further add to the disease burden. A large population of patients presents late with advanced kidney failure and multiple complications. Management is hampered by lack of health care services in rural area⁷.

Facility of dialysis is not available in the rural areas and most of patients die of complications. In our study highest mortality was seen in renal patients i.e. 8.12%. This indicates that there is a urgent need to develop CKD detection and prevention program. Various etiological factors should be found out, so that prevention programs can be targeted appropriately.

Snake and scorpion sting are the conditions prevalent in this area and constitute 4.97 % and with the mortality 2.02%. This shows that while treating such conditions one needs to understand the pathophysiology and develop treatment protocols.

Our analysis gave a brief idea about the disease pattern in rural hospitals. Study indicates that prevalence of CAD is increasing in rural India and there is urgent need for development and implementation of accessible and approachable primary and secondary prevention and treatment approach for this control of this epidemic.

References:

1. Survotharan S. G., Berry J. N.: Prevalence of coronary artery disease in urban population in North India. *Circulation* 1968; 37: 839-46.
2. Gupta S.P., Malhotra K.G.: Urban rural trends in epidemiology coronary heart disease. *J. Ass. Phy India* 1975; 23: 885-9.
3. Jajoo U.N, Kalantri S. P., Gupta O.P., Jain A.P., Gupta A. k., The prevalence of coronary artery disease in rural population from central India 1998: 36: 689-93.
4. Sing R.B., Niaz M.A., Ghosh Setav. E. Epidemiological study of coronary Arterial disease & its risk factors in an elderly urban population of North India. *J. Am Coll Nutr* 1995; 14: 628-34.
5. Chandha S.L., Radhakrishnaan S., Ramchandran K., Kaul U, Gopinath N., Epidemiological study of coronary heart disease in an urban population of Delhi. *Ind. J Med Res* 1990; 92:424-30.
6. Raman Kutty V., Balakrishnan K.G., Jayashree A.K., Thomas J. Prevalance of coronary heart disease in rural population of Thiruvananthapuram District, Kerala, India. *Ind. J. Cardiol.* 1993; 39:59-70.
7. Jha V., Current status of chronic Kidney disease care in south East Asia. *Semin Nephrol* : 2009 Sep: 29(5):487-96.

Address for correspondence:

*Dr Suvarna N. Patil,
Medical Director,
BKL Walawalkar Rural Medical College
and Hospital Sawarde, Tal – Chiplun,
Dist- Ratnagiri, Maharashtra, India.
Email: suvarnanpatil@gmail.com*