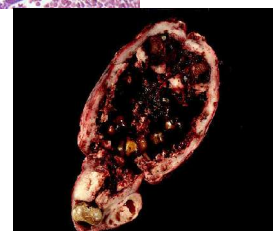
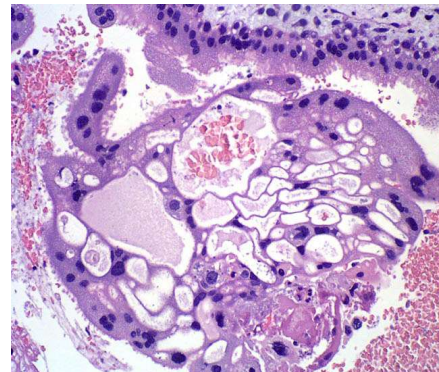


Proceedings of the Calicut Medical College Student Research Conference 2004

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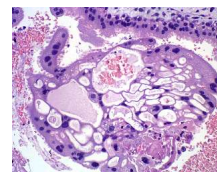
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COVER IMAGE

Vesicular mole
in a 32 y/o
woman with a
full term
pregnancy 1
year before.
HCG levels
lasted high for 3
months after DC,
then decreased
to 0. Florid hyperplasia of cyto- and
syncytio-trophoblast is seen in
hydropic villi
with small foci .



Squamous cell
carcinoma of
gallbladder in a
63 y/o WF
presenting clinically as acute
cholecystitis.



Courtesy: Dr. John Minarcik
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Problem Solving for Better Health

Vijayakumar K

Prof & HOD, Community medicine, Medical College, Kozhikode-673008, Kerala, India

E-mail: communitymedicine@gmail.com

Calicut Medical Journal 2005;3(suppl1)e1

Medical education should address the health needs of the society in which it develops. The emphasis should be given to the problems, which the physicians are likely to face in their career. With the impact of modern communication and science many of the local health issues pose a threat to become global. Consequently the medical education, which addresses the local needs, cannot forget the global situation as well. It is in this context that many of the developed countries have taken initiatives in global health as an important focus of medical education^[1]. On the other hand medical education in many of the developing countries fails to respond to the prevailing local health issues and the products are not equipped enough to address these issues. However there is a silver lining in this scenario also. Initiatives have taken shape to bring in and integrate this type of logic in medical education^[2, 3]. Many institutions support and develop local health research as part of medical education.

Most of the health problems of the developing countries require approaches different from that of the developed. The traditional medical education system, which oriented towards the developed communities, often fails to address this situation. Obviously newer approaches and newer initiatives have to be brought in. It is in this context that rearing of new professionals and training them to address these issues helps us to succeed. Young medical students are often at an advantageous position, in that, since they are not fully trained in the traditional way they will be in a position to bring in innovative initiatives^[4].

In some of the medical schools, these principles are accepted and put to use. The renewed interest in the evidence-based medicine is a pointer in this context. But almost all these initiatives are in clinical medicine. Learning and teaching of Community Medicine is yet to pick up the trail^[5].

Learning epidemiology and Community medicine in Indian context is far from interesting, to put it in a mild way. Consequently we get a generation of young graduates who are not so positively oriented to public health or to issues in the protection and promotion of the health of the population. This situation is compounded by the presence of a distinguished faculty, majority of who are not in a position to motivate the students or impart any skill among them, for a variety of reasons. Acquisition of knowledge takes place primarily through reading of books, thanks to the efforts of the students themselves. This results in diminished interest of the medical students in community medicine. Even the knowledge acquired from textbooks is primarily oriented towards medical care in developed nations. Therefore the students fail to comprehend and analyse the health problems seen around them. This leads to a further failure on their part, even after graduation, to initiate any intervention to contain the health problems of the society in which they live. This is one of the factors contributing to poor health management system in India.

Problem Solving for Better Health (PSBH) is a movement launched with an objective of helping students in medical colleges to have a critical view of the problems and develop approaches towards the prevailing health issues around them^[6]. Most often the students themselves are seen to develop a programme to either to evaluate the issue or even to intervene, wherever indicated. This was an amazing experience to all concerned. The programme in Medical College, Kozhikode was started in 2003, in which more than 50 projects are completed till date. All the completed works need special credit because they were carried out with conviction and commitment of undergraduate medical students. The students themselves selected even the types of projects, with proper guidance. This process helped them to work in groups and also to develop the communication skills both verbal and

written. This led to an increase of academic interest of not only the students but also even the faculty. Hitherto un- attended areas of public health started getting addressed. The spread of topics in breadth and depth, were entirely due the students themselves. The academic interest of the campus itself got a booster effect with 200 medical students searching for different types of medical information. Almost all the faculty and postgraduate students of every department helped their younger colleagues in their new endeavor by giving sufficient support and guidance. The result was spectacular. Students started to develop an enthusiasm for studying epidemiology and Community Medicine. More over, many of them got enchanted with sub specialties like neurology, gastroenterology and cardiology with newer perspectives and vision.

Abstracts of 22 such studies are being presented here, with the addition of three completely formatted text. Obviously, most of them are not any breakthrough works of science. But, all of them are the products of committed brains pursuing scientific approach with newer initiatives. We are proud to present glimpses of what we have accomplished at Medical College, Kohikode, and the premier medical institution of Northern part of Kerala. It has to be remembered that Kerala is only a tiny Indian state, which forms just over one percent of the land mass of India, a country with one billion people. These abstracts point to the immense scope of such medical explorations and their implications in the field of health care.

We acknowledge the services of the college authorities that have helped us to sustain the programme even during difficult times. All of the sister departments have helped us generously. It was through such a combined effort that the programme has reached at this stage. Above all, I appreciate and acknowledge the sincere efforts of my beloved students in getting the projects completed. We the faculty , and the students also acknowledge and appreciate the subjects in each completed project that were not just materials for methods, but human beings with emotions, life and vitality.

Reference

1. Catherine Bateman, Tim Baker, Elske Hoornenborg, Ulrika Ericsson, Bringing global issues to medical teaching, *Lancet* 2001; 358: 1539-42
2. Undergraduate and Medical Student research. Cincinnati Children's Hospital Medical Center <http://www.cincinnatichildrens.org/ed/research/med/default.htm>
3. Zier K, Stagnaro-Green A. A Multifaceted Program to Encourage Medical Students' Research. *Academic Medicine* (2001) 76: 743-747
4. John A Spencer, Reg K Jordan, Learner centered approaches in medical education, *BMJ* 1999; 318:1280-1283
5. Stone D.H., Public health in the undergraduate medical curriculum - can we achieve integration? *Journal of Evaluation in Clinical Practice*, February 2000, vol. 6, no. 1, pp. 9-14 (6).
6. http://www.dhfglobal.org/psbh/psbh_1.html accessed on 29/01/05

Knowledge and experience of Needle prick injuries among interns and nursing students

Binesh.B, Souda P., Vijay R.K, Jacob Jayin K, Ravi Prasad Varma
 Department of Community Medicine, Calicut Medical College.

Calicut Medical Journal 2005;3(suppl1)e2

Introduction:

Health care workers (HCW) involved in treating and nursing patients always face great risk of acquiring infections (1). Route of these infections could be through contact, aerosols, needle pricks, ingestion of pathogens etc (2). Body fluids and blood especially harbour a lot of pathogens that can easily be transmitted even with minute quantities. Diseases like HIV, Hepatitis B & C, Syphilis, malaria, chicken pox, haemorrhagic fevers etc all can easily be transmitted by very minimal amounts of infected body fluids (3). With the advent of new pandemic of HIV, the blood born diseases assumed importance in-patient to provider infections. Needle prick injuries (NPI) are the commonest route by which these diseases are transmitted to providers from patients. Incidents of NPI are usually under reported in all institutions world wide due to various reasons .At one end of the spectrum , it could be a very hectic, over crowded & understaffed hospital , while at the other end, it could be a sophisticated, state of the art clinic with stringent protocols and a very demanding management that an aspiring HCW may hesitate to report an incident fearing repercussions (4). One way or the other the result remains the same. It is doubtful whether adequate knowledge exist among health care workers of our region .Only by building proper knowledge and attitudes towards safety, needle prick injury and its consequences can be prevented. It is in this context that we wanted to study the experience of needle prick injury among the health care providers of this hospital and also their related knowledge.

Research question:What is the occurrence of Needle Prick Injury and attitude towards the same among 50 Interns and 50 nursing students at Calicut Medical College?

Methodology: A pre-tested questionnaire was formulated with the help of consultant epidemiologists and community medicine experts .The health care workers selected were 50 Interns and 50 nursing students from the wards of Calicut Medical College hospital. The information collected was tabulated and analysed.

Results:-It was observed that 82% of the Interns interviewed, had at least one incident of NPI and 56% of the nursing students had at least one experience of NPI. The mean number of NPI among Interns was 4 and mean number of NPI among the nursing students was 1.58.

Table 1 - High-risk procedures leading to NPI in Interns and Nursing students.

| Procedures | Interns | Nursing students |
|---------------------|---------|------------------|
| | % | % |
| Suturing | 61.2 | 12.2 |
| Blood collection | 24.5 | 16.3 |
| Recapping | 14.3 | 59.18 |
| Conducting delivery | 4 | 0 |
| Disposing needle | 2 | 2 |
| Injections | 0 | 14.3 |

(The numbers may not add up since multiple injuries are possible for each subjects)

Table 2 -explanation for occurrence of NPI as given by Interns and Nursing students.

| Procedures | Interns | Nursing students |
|-----------------------------------|---------|------------------|
| | % | % |
| Carelessness | 74 | 82 |
| Hurry | 72 | 94 |
| Lack of experience | 30 | 36 |
| Lack of Knowledge about procedure | 12 | 14 |
| Lack of Knowledge of NPI | 4 | 10 |

(The numbers may not add up since multiple answers were possible)

Table 3- Methods suggested by Interns and Nursing students for reducing the NPI

| Procedures | Interns | Nursing students |
|---|---------|------------------|
| | % | % |
| Usage of gloves for all standard procedures | 78 | 58 |
| Better orientation of procedures | 46 | 38 |
| Proper disposal of needle | 44 | 70 |
| Health education about NPI and consequence | 34 | 60 |
| Early exposure to clinic | 12 | 8 |

(The numbers may not add up since multiple answers were possible)

It was opined by 66% of the Interns and 72% of the nursing students that all inpatients should be screened for HIV and HBV infections.

Discussion:The results obtained from the study point out that a vast majority of Interns(82%) and nursing students (56%) have had at least one incident of NPI. This is an alarming figure taking into consideration that there is an ever growing risk of contacting blood born pathogens especially HIV, HBV & HCV. Suturing and blood collection were the main procedures that inflicted maximum episodes of NPI among Interns and among nursing students it was injection procedures. The problem procedures reflect on the job undertaken by the concerned HCW. While, many factors culminate to give rise to NPI, a heavy work load, inexperience of the HCW, technical difficulties and patient noncompliance, to name a few are real issues that should be looked into by the concerned superiors (5,6,8,10). Needle recapping is another procedure that gives rise to unwanted NPI. The procedure itself is an unwarranted one and proper awareness should be imparted to avoid such unwanted, time consuming and catastrophic rituals with no scientific basis that has unfortunately crept into the health system. Steps to reduce NPI suggested by Interns were the use of gloves. The type of gloves used currently in this hospital is not puncture resistant. Nursing students stressed on the proper disposal of needles. The availability of needle incinerators and a proper waste disposal with puncture resistant containers should be ensured and their proper use enforced. The study has revealed a similar pattern to that seen in many parts of the world and corroborates other studies done in this regard. (5,7,11,12-15)

Conclusion:

The study clearly points out the fact that the risk of acquiring blood born infections is alarming and proper steps are needed to prevent and educate HCW on the dangers of NPI. The need of the hour is to create a conducive reliable system to record all known cases of NPI and offer post exposure prophylaxis in a discrete yet systematic manner, which would coerce HCW to report incidents without fear of repercussions.

References: -

- 1) Sagoe-Moses C, Pearson RD, Perry J, Jagger J. Risks to health care workers in developing countries. *N Engl J Med* 2001; 345:538-541
- 2) Jagger J, Bentley M, Tereskerz P. A study of patterns and prevention of blood exposures in OR personnel. *AORN J* 1998; 67:979-996.
- 3) Twitchell KT. *AAOHN J.* 2003 Jan; 51(1): 38-45; quiz 46-7 Bloodborne pathogens. What you need to know--Part I.
- 4) Fisman DN, Mittleman MA, Sorock GS, and Harris AD Willingness to pay to avoid sharps-related injuries: a study in injured health care workers. *Am J Infect Control.* 2002 Aug; 30(5): 283-7.
- 5) Evaluation of blunt suture needles in preventing percutaneous injuries among health-care workers during gynecologic surgical procedures- New York City, March 1993-June 1994. *MMWR Morb Mortal Wkly Rep* 1997; 46:25-29.
- 6) Stringer B, Infante-Rivard C, Hanley J. A prospective study of the effectiveness of use of the hands-free technique, a recommended work practice. *Infect Control Hosp Epidemiol* 2000; 21:112-112.abstract
- 7) Baldo V, Floreani A, Dal Vecchio L, Cristofolletti M, Carletti M, Majori S, Di Tommaso A, Trivello R. Occupational risk of blood-borne viruses in healthcare workers: a 5-year surveillance program. *Infect Control Hosp Epidemiol.* 2002 Jun; 23(6): 325-7
- 8) Karadeniz G, Gunduz T, Altiparmak S, Yanikkerem E. Analysis of job-related risks faced by hospital nurses. *Int J Clin Pharmacol Res.* 2004; 24(1): 27-31
- 9) Dement JM, Epling C, Ostbye T, Pompeii LA, Hunt DL. Blood and body fluid exposure risks among health care workers: results from the Duke Health and Safety Surveillance System. *Am J Ind Med.* 2004 Dec;46(6):637-48.
- 10) Wilburn SQ. Needlestick and sharps injury prevention. *Online J Issues Nurs.* 2004 Sep 30; 9(3): 5
- 11) Ayranci U, Kosgeroglu N. Needlestick and sharps injuries among nurses in the healthcare sector in a city of western Turkey. *J Hosp Infect.* 2004 Nov; 58(3): 216-23
- 12) De Carli G, Puro V, Ippolito G; Risk of hepatitis C virus transmission following percutaneous exposure in healthcare workers. *Studio Italiano Rischio Occupazionale da HIV Group Infection.* 2003 Dec; 31 Suppl 2:22-7.
- 13) Norsayani MY, Noor Hassim I. Study on incidence of needle stick injury and ctors associated with this problem among medical students. *J Occup Health.* 2003 May; 45(3): 172-8.
- 14) O'Connell T, Hayes B. Occupational sharps injuries in a Dublin teaching hospital. *Irish Med J.* 2003 May; 96(5): 143-5.
- 15) Jepsen MP, Smith E.: Ugeskr Laeger. Needlestick injuries among medical students at the University of Copenhagen. A questionnaire study in 2001. 2003 May 26; 165(22): 2275-9.

Risk factors of pneumonia in children

Padmavathy R, Jessiah GK, Pramila K, Jacob Jayin K, Vijayakumar K
 Department of Community Medicine, Calicut Medical College

Calicut Medical Journal 2005;3(suppl1)e3

Introduction: Children are considered susceptible to a host of diseases as they are still in their formative and developmental period. Child deaths are more in countries like India with its geographical and socio-economic characteristics. 34% of the total child mortality in India is accounted by Acute Respiratory tract Infections (ARI) especially in those below 5 years (1). An estimated 960,000 Indian children die annually due to pneumonia. An Indian child stands at a risk of contracting pneumonia, which is 30-75 times higher than that for a child in developed countries. There are various factors that culminate to result in such high number of cases in India. Kerala is appreciated for various health achievements compared to other Indian states and also for its better socio-economic status. It has low infant mortality rates, high life expectancy at birth and the lowest maternal mortality rates on par with most developed countries. A paradox of sorts however exists with the number of children who are affected with pneumonia in Kerala. The number of cases reported are much beyond the ideal and a huge disparity is seen. The study conducted was aimed at seeking out the reason for the innumerable cases of pneumonia and to establish the risk factors involved in contracting pneumonia in children.

Research question: What are the risk factors of pneumonia among children admitted in the Institute of Maternal & Child Health (IMCH), Calicut, Kerala?

Methodology: -A Case-control study was conducted in IMCH, Calicut. 44 children diagnosed as pneumonia in this institute were taken as the cases and 44 children admitted with other systemic illnesses (non-infective origin) in the Institute were included in the study as the controls. A case of pneumonia was defined as children admitted with clinical diagnosis of pneumonia aged between 1-5 years. Controls were children of the similar age group without infectious diseases.

A questionnaire was developed to get the personal details of the subjects such as age, Gender, locality, socioeconomic status, education & employment of parents and history of smoking in the family. Details of Environmental factors like housing, ventilation, perceived air pollution in the locality, type of cooking fuel used in the family were also collected. Details regarding immunization and associated morbidities were included in the questionnaire. Data were analyzed to get odds ratio of the factors and a logistic regression modeling was done to obtain adjusted odds ratios.

Results and discussion: -

The mean age of cases was 2.648 with a standard deviation (S.D) of 1.433.

The mean age of the controls was 2.966, with a standard deviation of 1.327.

Table no 1 - Relationship of Socio-demographic factors with Pneumonia

| Factor | | Case N=44 | Control N=44 | Total | Chi square value, d.f and p value |
|-------------------------|--------|--------------|-----------------|-------|--------------------------------------|
| Gender | Male | 28 | 24 | 52 | 2 = 0.752, d.f = 2 P = 0.386 |
| | Female | 16 | 20 | 36 | |
| Socioeconomic status | BPL | 32 | 36 | 68 | 2 = 1.035, d.f = 2 P = 0.309 |
| | APL | 12 | 8 | 20 | |
| Locality | Urban | 11 | 6 | 17 | 2 = 1.823, d.f = 2 P = 0.177 |
| | Rural | 33 | 38 | 71 | |

As seen from the table there is no association of pneumonia with gender, socioeconomic status or locality.

Table no 2- Relationship of Educational and occupational status with pneumonia

| Factor | | Case N=44 | Control N=44 | Total | Chi square value, d.f and p value |
|-----------------------------|-------------------|--------------|-----------------|-------|--------------------------------------|
| Education Father | Primary | 6 | 9 | 15 | 2 = 0.723, d.f = 2 P = 0.395 |
| | More than primary | 38 | 35 | 73 | |
| Education mother | Primary | 0 | 5 | 5 | 2 = 5.301, d.f = 2 P = 0.021 |
| | More than primary | 44 | 39 | 83 | |
| Employment status Father | Employed | 44 | 41 | 85 | 2 =3.106, d.f = 2 P = 0.078 |
| | Unemployed | 0 | 3 | 3 | |
| Employment status Mother | Employed | 3 | 3 | 6 | 2 =0, d.f = 2 P = 1 |
| | Unemployed | 41 | 41 | 82 | |

Table no 3 - Relationship of Selected risk factors with Pneumonia

| Factor | | Case N=44 | Control N=44 | Total | Odds ratio (95% CI) |
|--|-----------------|--------------|-----------------|-------|--------------------------|
| Exposure to Passive Smoking | Exposed | 26 | 15 | 41 | 5.526 (1.175 - 6.638) |
| | No exposure | 18 | 29 | 47 | |
| Perceived Air pollution in locality | High | 22 | 11 | 33 | 5.865 (1.216 - 7.399) |
| | Low | 22 | 33 | 55 | |
| House hold ventilation | Good | 29 | 34 | 63 | 0.569 (0.222 - 1.457) |
| | Poor | 15 | 10 | 25 | |
| Fuel used for cooking | Wood | 42 | 41 | 83 | 1.537 (0.244 - 9.677) |
| | Others | 2 | 3 | 5 | |
| Full Immunization | Yes | 26 | 13 | 39 | 1 (0.338 - 2.995) |
| | no | 18 | 31 | 49 | |
| H/o of ARI in Family members | Yes | 26 | 13 | 39 | 3.444 (1.424 - 8.333) |
| | Nil | 18 | 31 | 49 | |
| Co morbid conditions | Present | 18 | 13 | 31 | 1.615 (0.682 - 3.994) |
| | Absent | 26 | 31 | 57 | |
| Nutrition (Wt for age) | Normal | 26 | 24 | 50 | 1.204 (0.517 - 2.801) |
| | Under nutrition | 18 | 20 | 38 | |

It is seen from the above table that passive smoking, perceived air pollution and History of contact with respiratory infection in the family act as the risk factors of pneumonia. Good household ventilation protects the children. Multivariate binary logistic regression was carried out. Passive smoking and history of upper respiratory tract infection was found to be significantly associated with pneumonia. The R2 of the model was found to be 0.142. The sensitivity and specificity of the model was 84.1% and 45.5% respectively with overall correct classification of 64.8%. The adjusted odds ratio and the 95% CI are given below

Passive smoking - 2.941 (1.18 - 7.35)

H/o of URTI - 3.61 (1.44 - 9.01).

The study shows that passive smoking and history of contact with URTI in family rank top in all the risk factors. Paternal life style modification and improving housing standard will help in fighting this problem.

Awareness of complications of diabetes and importance of glycemic control among diabetic patients of Calicut.

Chandran DS., Venu PG., Chaddha P., Vijayakumar K
Department of Community Medicine, Medical College, Calicut

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Diabetes is turning out to be an important metabolic disease in India. Over the years, the prevalence has been increasing steadily. This increase has occurred both in rural and urban areas. As the urbanization increases, Non Insulin Dependent Diabetes Mellitus (NIDDM) turns out to be an important public health challenge. At present, the prevalence of NIDDM among adult population varies between 10 to 20% in urban areas and 2 to 10% in rural areas of India. The disease is notorious for causing various types of complications viz cardiovascular, renal, ocular, neurological to name a few. These complications usually lead to mortality or severe morbidity that compromises the quality of life. The awareness of complications seem to be overlooked by most patients in our society .The study was carried out with the objective of determining whether there is a correlation between awareness regarding the complications of diabetes and the blood glucose control among 50 patients attending the Diabetic Clinic at the Calicut Medical College. A semi-structured questionnaire was formulated and assessment was carried out taking the previous 4 consecutive Fasting Blood Sugar(FBS) values as the benchmark The data obtained had the following highlights. It was seen that with regards to educational status of the patients, 39% had high school education and higher and the rest 61% had primary education. The average FBS values was calculated and it was observed that FBS values of less than 100 was seen in 4% of the subjects .30% of the patients had their average FBS values between 100-149 mg%, 34% of the patients had FBS values in the range of 150-199 mg%, 26% of the patients had their FBS values in the range of 200-249 mg%, the remaining 6% of the subjects showing FBS values of 250 mg% and higher. A score of awareness on a scale of 10 was used to assess the awareness of patients to the complications resulting from uncontrolled diabetes. The relationship between the score of awareness and average FBS values was recorded. It was noted that a score of less than 3 was seen in 20% of the patients and the cumulative average FBS value for this group was 222.6 mg%, a score of 3-5 was noted in 44% of the subjects and the average FBS value for the group was 186 mg%. 36% of the patients had a score of 6 and above and their average FBS value was 140. It should be noted that the average score of awareness was higher in patients with high school education in comparison with patients of primary education. Educational status was found to influence the awareness of complications. As the average score of awareness goes down the average FBS values go up. Patients with an awareness score of 6 and higher had the best glycemic control over the longer period. Considering the socio-economic profile of patients presenting to the Calicut Medical College those patients from the lower socio-economic strata are the people with poorer education. Since the cost of management of complications in NIDDM and the associated loss of quality of life of subjects suffering from the disease is high, it is of paramount importance that Physicians give a little more importance to patient education, especially for glycaemic control.



Maternal Stress in Paediatric Leukaemia patients in IMCH, Calicut

Kumar K, Neethu KS., Dharmaraj R, Vijayakumar K
Department of Community Medicine, Medical College, Calicut

Calicut Medical Journal 2005;3(suppl1)e5

Leukaemia was considered synonymous to death in the past till the advent of superior chemotherapeutic drugs. The availability of newer modes of treatment to alleviate the lethality of the disease has brought it the distinction of being a chronic condition. This sea tide change has also sprouted a rise in the various associated problems. Most families of the diseased are traumatised by the disclosure of the affliction, more so if the diseased is a child. Mothers of most leukaemia children needless to say suffer a great deal of mental trauma in the form of stress amounting to depression and psychosis in rare cases. The study conducted revealed new insights into the psyche of mothers with children afflicted with leukaemia. The study is of significant importance in India as very few conclusive studies have been conducted in this aspect and a very startling negligence is seen in helping people with psychological problems. In this background, a cross-sectional study was conducted among Mothers of 44 paediatric leukaemia patients. The subjects were interviewed and assessed using the "Depression Anxiety Stress Scale (DASS)" and the "Family Burden Interview Schedule" modified into Malayalam (local language). The interview also focused on the financial burden, disruption of family routine activities, leisure, and interactions and also on the physical and mental health of the members. All items were scored on a 3-point scale. The salient features of the data collected shows that depression of moderate to severe levels was seen in 84.09%(moderate-50%, severe-34.09%). Anxiety among the subjects was 84.1%(moderate-54.5%, severe 29.6%). 95.45% of the subjects had moderate to severe levels of stress scores. (Moderate -36.36%, severe-59.09%). The financial burden inflicted was heavy on the families with 97.73% finding difficulty in incurring the cost of treatment, which is consistent with the fact that all the families belonged to the same socio-economic background (low income group). Even though the size of the study group was small, the study gives a clean picture that suggests without doubt that families especially mothers do suffer a lot of mental agony. The trend seen in the study cannot be overlooked and calls for urgency on the part of health workers to have a more macroscopic view of the patient and his/her family. A routine psychological counseling should be incorporated and an awareness group to alleviate maternal concerns should form part of a standard regime in the treatment guidelines rather than making the "disease and cure" inanimate.

Prevalence of obesity in adolescent girls in the age group of 13-16 years in Calicut

Danish E, Deepak G, Dileep Narayanan, Vasudevan B,
Department of Community Medicine, Medical College, Calicut

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Obesity is a well-recognized problem in the developed world. Newer dietary habits have led to a spurt in cases of obesity in India too. Sedentary lifestyles with growing populace and space constraints all play their part in the development of obesity. Once the proportion of obese people increases, Coronary Artery Disease, NIDDM, Hypertension and also various malignancies increase in the population. It has been observed that one third of all the adult obesity has roots in childhood over-nutrition. Thus the detection and correction of childhood over-nutrition will help us to fight the leading non-communicable diseases of the day.

The study was conducted to estimate the prevalence of obesity among 152 adolescent girls in the age group of 13-16 years selected arbitrarily from a school in Calicut. A Cross sectional study was carried out with the help of a questionnaire covering selected factors which may have a bearing on the development of obesity.

A body mass index of 25 was taken as the cut-off for overweight and obesity. There were 8 (5.2%) children who were in the overweight or obese category. It is quite notable that 5/8 of them had a linkage to family history of Diabetes Mellitus, Hypertension or Coronary Artery Disease. 104 out of the 152 girls were having BMI in the acceptable range of 18.5 to 24.9. It is notable that in the present study the level of obesity observed is much less than the reported figure for urban Kerala. This could be probably due to the size and method of sampling.

Pattern and Sensitivity of Post operative wound infections in Medical College Hospital, Calicut, Kerala, India

Ameena TP, Shameela P, Shamna MA, George B
Department of Community Medicine, Medical College, Calicut

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Postoperative wound infection is a dreaded entity feared by every surgeon. Even with strict aseptic precautions, postoperative wound infection can occur. The emergence of antibiotic resistance has aggravated the problem. Sensitivity patterns always keep changing and are unique to every institution but emerging trends in a geographical area can serve as a watchdog to prevent and detect new resistance in common pathogens. The study was conducted with the aim of identifying common organisms in postoperative wound infections in Calicut Medical College (CMC) and to determine the sensitivity pattern. 34 patients were chosen by convenience sampling in November 2003. Pus swabs were collected from the infection sites of these patients and culture and sensitivity study was done in the Department of Microbiology, Calicut Medical College. There were 38 isolates out of 34 cases. 34.25% had E. coli, 18.4% had proteus, 13.5% had Klebsiella, 13.5% had Pseudomonas and the remaining 21% was constituted by other organisms (Staphylococcus, acinetobacter, Enterobacter, MRSA). The sensitivity tests were carried out with antibiotics like Ampicillin, Cefazolin, Gentamicin, Tetracycline, Amikacin and Ciprofloxacin.

The results showed that all 13 E.coli isolates were resistant to Ampicillin. Eleven were resistant to Cefazolin and Tetracycline. 7 of the 13 were resistant to Gentamycin and Ciprofloxacin. Only three isolates showed resistance to Amikacin.

All proteus isolates were resistant to Ampicillin and Tetracycline. 6 of 7 were resistant to Gentamycin, 4/7 to Cefazolin, 1/7 to Ciprofloxacin and nil to Amikacin.

Most other culture media showed mixed growth and multi drug resistance was observed. The results do suggest that Amikacin could be considered as an empirical agent for post operative wound infections in the surgical wards of CMC. However more stringent tests need to be carried out and steps taken to control its use within wards as growing resistance could spell the doom of another antibiotic which will be a burden to the patient and hospital. The study serves as a pointer that regular surveillance is crucial and sensitivity patterns are unique to each agent and likely to change over time. Emphasis for a culture and sensitivity pattern for every recorded post operative wound infection case coupled with a regular analysis of the data on an inter departmental platform should be the dictum if the problem is to be contained scientifically. Strict infection control measures coupled with microbial surveillance and development of a dynamic antibiotic policy for the institution will go a long way in controlling post-operative infections

Refractive errors among school children

Sandeep BR, Sandeep U, Priya P. Kartha, Rao B.

Department of Community Medicine, Medical College, Calicut

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Refractive errors are a very common cause of visual impairment around the world. Visual defects in school going children are of real concern both medically and educationally. Refractive errors can lead to a disinterest in education. Moreover children will be apprehensive to attend school. These factors will lead to poor scholastic performances. Medical technology has advanced to the stage that almost all of refractive errors can be corrected if diagnosed early. Undiagnosed refractive errors have been observed in 5 to 7% of school children. Diagnosis as well as correction of refractive errors is comparatively simple and the results of interventions are immediate.

The study was conducted with the aim of detecting refractive errors using teachers in the first screening level as they are the most likely to suspect the presence of a refractive error among their pupils. A cross-sectional study was conducted covering 1244 children in the age group of 11-15 years studying in three upper primary schools in Feroke educational sub District in North Kerala, India. The primary assessment was done by the teachers using Snellens chart. A team of medical students rescreened the students who were found to have refractive errors. The confirmed cases were then subjected to a detailed ophthalmological examination and the final diagnosis was arrived at.

Out of the 1369 students on the school rolls, 1244 students (90.8%) were examined. 198 students were found to have defective vision by teachers. These students were re-examined by medical students and 160 pupils were referred for ophthalmological examination. 62 students were found to have defective vision and have received prescription for glasses. There were 15 students who were already using glasses for normal vision.

The total prevalence of refractive errors in the study population was found to be 6.18% of which only 2.09% was already using glasses. Over 70% of children with refractive errors remained undetected in this population. Among children wearing glasses, only 57.7% were adequately corrected. The prevalence of refractive errors in the 5th, 6th and 7th standards were 5.4%, 6.1% and 7.06%. Girls (7.55%) were having a slightly higher prevalence than boys (5.04%).

The prevalence of refractive errors in other parts of India is of similar levels. However, considering the achievements in the field of health, one would expect higher detection rates in Kerala, especially in urban areas, This was found to be lacking even in urban Kerala. The educational experts and Public Health practitioners should look into the matter urgently and take appropriate corrective measure. The idea of using schoolteachers for vision screening is not new, but is not being practised. This study re-emphasizes the importance of screening by teachers for refractive errors in primary education set up itself.

Quality of life after palliative gastrectomy among carcinoma patients

Kala P, Revathi M, Maju Jose, Ravi Prasad Varma, Jayin Jacob
Dept of Community Medicine, Medical college, Calicut

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Gastric carcinoma is a debilitating condition with high mortality. It is one of the most common causes of cancer deaths in the world. Assessment of quality of life of patients who have undergone a palliative surgery for this ailment is very important, though it is not carried out often. It is because of the innate difficulty in measuring the quality of life. The tool, dimensions and standardization of quality assessment poses difficulty across various populations. For assessment of quality of life, World Health Organization (WHO) has developed the WHO QOL-100 scale, which critically analyses the various aspects to estimate quality of life. An abbreviated version of this scale -WHO QOL BREF was used in the study to assess the quality of life. The study was carried out among 30 patients who had undergone palliative surgery for gastric carcinoma and on follow up at the Calicut Medical College. The patients were selected from various oncology/palliative care wards. These patients were interviewed and subjected to a WHO QOL BREF assessment. The salient statistically significant parameters obtained revealed the facts mentioned below.

Of the patients interviewed, 66.7% were greater than 50 years of age. Males formed 63.3% of the subjects interviewed. Energy levels for everyday life activities was assessed and it was found that 43.2% of the subjects said they had a feeling of no energy, 16.7% opined they had little energy for everyday life, 30% of the subjects said they had moderate amounts of energy, 6.7% opined that they mostly had enough energy levels and 3.3% said they had complete energy levels as prior to surgery. Physical health was measured in percentages based on subjective assessment. It was noted that physical health was of a low value (less than 25%) in 30% of the patients, 20% of the patients opined they had physical health levels between 25-50%, 26.7% of the patients reported their physical health to be in the range of 50-75%, the remaining 23.3% said their physical health was in the range of 75% and higher. The psychological aspects were also measured in a similar fashion and it was noted that 26.7% had a low value (less than 25%), 23.3% of the subjects had a score between 25-50%, 26.7% of the patients reported their psychological score would be between 50-75%, the remaining 23.3% said their psychological aspect would score higher than 75%. The patients were asked to score their social relationships on a scale of 0-100%, 40% of the patients reported that their social relationships would fare less than 25%, 13.3% of the subjects said that they would rate their social relationships between 25-50%, 30% of the patients said they would rate their social relationships between 50-75% and the rest 16.7% rated their social relationships to be greater than 75%. The study shows that 66.7% of the subjects are above 50 years of age and is highly indicative that they are dependent on other family members for their daily need as is unique to our social setup. The quality of life was deeply influenced by the aspects of social relationships with 53% of the subjects having low to medium levels of social relationships. The study provides an insight into the fact that patients with debilitating conditions like gastric carcinoma after undergoing radical surgical procedures cocoon themselves. This could be a response to attitudes in our society including lack of attention to proper steps for palliation as well in rehabilitation. The palliative care and the quality of life in terminally ill patient is an area, which has to be addressed urgently in our setup. More professional response and academic reaction is required for this purpose in our setup.

BCG vaccination status among Paediatric TB cases in IMCH Calicut

Anandhan N, Praveen A, Vinodh , Ravi prasad Varma, Jayin Jacob
Department of Community Medicine, Medical College, Calicut

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TB is one among the most wide spread infections around the world. With increasing cases of multi drug resistant strains in most of the countries of the world, the control of TB assumes greater importance. Childhood tuberculosis accounts for 15% of the total TB cases .It occurs as an aftermath of failure to control tuberculosis in adults. Estimates suggest that this debilitating disease accounts for around 1.7million child deaths every year, world over. BCG remains the only currently available, commercially viable vaccination. Protective effect of BCG is defined as the percentage reduction of new TB cases among tuberculin negative BCG vaccinated persons in comparison with non-BCG vaccinated persons. Efficacy of BCG is often debated. This study was conducted with the main objective of finding the BCG vaccination status in complicated TB cases. A questionnaire based data collection was carried out and the results are given below. The age group of the children studied, was 0-12 years .Of this 42%constituted the 0-4 years age group, 30% constituted the 5-8 year group and 28% the 9-11 year group. The numbers of male and female patients were equal. 6.5% belonged to the below poverty line economic group while the rest were above the poverty line. 70 % of the cases were from rural areas while the rest were from the urban areas. History of contact with a known tuberculosis patient in the recent past was 42% while the rest did not give any corroborative evidence to suggest contact with a tuberculosis patient. 88% of the subjects had received BCG vaccination and out of these children the BCG scar was seen only in 54.5% of those vaccinated. Mantoux test was found to be positive in 80%. The conclusion derived was that the immunization coverage need to be improved further and quality of BCG vaccination should be improved as there is poor scar mark even after vaccination.

Use of Anaesthetic agents for minor surgical procedures

Sreeja J S, Sreeja P S, Soumya V K, Firoz, Jayin jacob
Dept. of Community Medicine, Medical college, Calicut

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Surgical procedures nowadays have the use of anaesthetic agents as integral part. Many of the minor surgical procedures are carried out without administering local anesthesia. The practice is widely prevalent throughout the state. In this context we conduct this study to identify the attitude of surgeons and patients towards the use of local anesthetic agents. Information from both doctors and patients undergoing minor operative procedures were collected. 42 doctors and 43 patients were interviewed. Selected minor surgical conditions were followed up. The analysis of the data obtained revealed the following salient points. Of the doctors interviewed 76% were post graduate students and the rest were faculty members. 71% reported that they resorted to local anaesthesia in selected cases only. 80% of respondents who have not opted for Local anesthesia were postgraduate students. Reasons attributed towards paucity of using anaesthetic agents were heavy workload (38.1%), not necessary (37.5), lack of supportive staff (21.4%), fear of complications (25.8%) and non availability of drugs (14.2%).

43 patients were interviewed who had undergone one of the selected procedures. Most of them had not received any local anaesthetic agent.70% of the patients reported that they had moderate to severe pain, 30% reported that they felt mild pain during the procedures. There is a chance that at least some of the subjects did not want to divulge their suffering to the investigators. 51.2% of the patients interviewed opined that local anaesthetic agents should be used during these procedures. The difference of 18.8% (with those reported to have pain) indicates the perception of patients. Probably their response might have been influenced by the suggestions of the treating doctors.

71% of the faculty reported that local anaesthetic agents were used for selected procedures, in apprehensive and uncooperative patients. This proportion is not reflected among the subjects who underwent minor procedures. So there is a mismatch between the two statements. Due to Various constraints the practice of local anesthesia is not given adequate care in minor surgical practice. When majority of patients report about suffering due to pain it is high time that we should incorporate it into daily practice.



Causes of maternal mortality in IMCH Calicut in 2000-2002

Kashika N, Rajith K R, Umer Farooke, Yahiya Baboo, Vijayakumar
Department of Community Medicine, Medical College, Calicut

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Kerala is considered as a state with comparatively low maternal mortality rate among various Indian states. Its maternal mortality rate stands at about 84 per 100,000 live births, while that of India is around 540 per 100,000 live births. Social issues always rise up whenever there is a maternal mortality in Kerala and always a pointing finger is drawn upon the medical fraternity. Even with its best health infrastructure and also favorable overall mortality figures the prevailing level of maternal mortality is unacceptably high. Further reduction in maternal mortality can be only be achieved by studying the current causes. This idea may give us some clue to interventions. The causes of maternal mortality should be ascertained at the community level for this purpose. However in a state where nearly cent percentage deliveries are taking place in health institutions data from the health facility may reflect the community picture. The study was conducted with the objective of determining the causes of maternal deaths at the Institute of Maternal and Child Health, Calicut for the years 2000-2002. The records of IMCH were analysed and conclusions were drawn from the documented facts. The total number of deaths recorded in the three years of study was 60. Of the total number of deaths it was noted that 90.2% of the women were from rural areas, the rest 9.8% was from urban areas. Almost 90% of the mothers who succumbed to various complications came from rural areas after initially receiving treatment from various local hospitals and being referred to the IMCH when the condition of the patients get worsened. The district wise spit up of maternal deaths recorded in this hospital is as follows: Kozhikode -45%, Malappuram-30.2%, Wayanad-10%, Kannur-3.3%, and Trichur-1.5%. It was noted that among the maternal deaths, 43.3% were primi gravidae, the rest being multi gravidae. 3.3% of the women had a confirmed history of previous termination of pregnancy. 1.6% of the women had a previous abortion. Among the cases it was noted that 65% of the foetuses were still born and the rest of the 35% were relatively well neonates. The causes of deaths in the mothers were uncontrolled Pregnancy induced hypertension (PIH) and eclampsia -68.3%, uncontrolled haemorrhage-30%, jaundice-10%, anaemia-3.3%, cardiac arrest-5% & rupture uterus-5% (overlapping figures are seen due to multiple causes being attributed to some of the patients). Unlike in other parts of the country, the proportion of hemorrhagic complications are less here. The predominance of PIH and eclampsia among the causes of maternal death warrant unique intervention strategies right from the sub center level to the tertiary care hospital.

Anxiety among pre professional entrance examination repeaters

Anees V, Azhar C M, Louji B, Kishore Kumar S
Dept. of Community Medicine, Medical college, Calicut

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Students in a country like India face a great deal of pressure due to the existing competitive atmosphere. Constraints on number of openings to elite professional courses as well as the sheer population numbers increase the competition. Kerala none the less faces a great brunt as it has a high literacy rate. Entrance examinations form the basis of selection to almost all professional courses and a great amount of undue pressure is exerted on students to perform. The study was conducted to determine the level of anxiety among entrance repeaters and to pinpoint the major determinants of anxiety in the above population. A cross sectional study was conducted and 103 students were interviewed .A self assessment questionnaire was prepared incorporating parameters to assess the socio-demographic profile and also screen the anxiety levels by using a Anxiety Self Rating scale.

The data obtained revealed the following statistically significant facts. Of the 103 students interviewed 24% of them had normal levels of anxiety, 51% had mild anxiety and 25% had clinically significant levels of moderate to severe anxiety. This by any chance is disproportionately high for any population. The age wise distribution showed that in 17 year olds 15% reported to have moderate to severe anxiety. Among the 18 year olds it was noted that 30% reported to have moderate to severe anxiety. Age has a positive bearing on anxiety disorders. Levels of anxiety were also compared among the number of attempts taken at clearing the entrance exams. Among students who had their first attempt 22% reported to have moderate to severe anxiety levels. Number of attempts also increases the anxiety levels. Among the subjects who had 2 attempts or 32% reported to have moderate to severe anxiety levels. Anxiety was assessed taking the current chance of success as opined by the students themselves and 3 categories were noted - low to average, high and sure. Among subjects who rated their chance as low to average 30% reported to have moderate to severe anxiety levels. Among subjects who rated their chance as high 18% reported to have moderate to severe anxiety levels. Among subjects who were sure of making it through the entrance exams 28% reported to have moderate to severe anxiety levels.

Anxiety levels were also compared with the maternal education. It was seen that in subjects whose mothers had SSLC education or lower 23% reported to have moderate to severe anxiety levels. Among subjects whose mothers had a higher secondary education 30% reported to have moderate to severe anxiety levels. Among subjects whose mothers were graduates or 34% reported to have moderate to severe anxiety levels. Increasing maternal education increases the anxiety levels of children's. Anxiety was also compared against the student's perception of their performance at their coaching institutions. It was noted that among subjects who rated their performance as average , 28% reported to have moderate to severe anxiety levels, while it was 14% in above average group and 32 % among excellent performers.. The level of anxiety assumes a u shaped curve when analyzed in terms of students' own perception of their performance. It is essential to built system to cope with level of anxiety the students are facing.

Change in trends in the stage of detection of Carcinoma Cervix

Salva Umer, Ambili K P, Bindhya, Aravindan K P
Dept of Community Medicine, Medical college, Calicut

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Pap smear screening is a simple tool, which facilitates detection of Carcinoma cervix at an early stage, so that the morbidity and mortality associated with it can be reduced. As the awareness level as well as the infrastructure in the society improves we expect an early detection of cases. Early detection obviously improves the outcome. The knowledge of the stage at which it is being detected will help us to plan a proper service. It is in this context that a study was undertaken to compare the stages of detection of carcinoma cervix in 2002 with that of 1993. Case records of the dept of radiotherapy for the years 1993 and 2003 were examined to find out the stage at presentation. Early stage was defined as Stages 0,1 and 2. Stage 3 and 4 were considered as late stages.

The mean age of presentation was 49.6 yrs in 1993 and 53.4 in 2002. Presentation of cases at early stage has increased from 2.5% in 1993 to 20% in 2002, in contrast to the late stages, which showed a decrease. Higher age of reporting gives a direction of the decline in incidence of the disease as we have seen in the developed countries. A favourable trend of early detection was observed in the study. Even though the trend is favourable, the rate of picking up of early stage is still unacceptably low. Further achievements in increasing early detection can only be achieved by orienting health professionals. Also cancer education specifically targeted to women can pay rich dividend.

Carcinoma breast - Change in stage of presentation during 1997 & 2003

Athira N, Pretty M, Amitha R, Firoz
Dept of community Medicine, Calicut

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Breast cancer is one among the commonest causes of death in middle aged women in the developed world. Though carcinoma of the cervix remains the commonest form of cancer in women in many parts of India, Carcinoma of the breast has become the commonest malignancy among the women of Kerala. Even though carcinoma of the breast can be picked up earlier with a good clinical examination and cell cytology, more than 2/3 of women present with carcinoma breast in an advanced stage with ulceration and fungation. As literacy status in Kerala has reached its peak we will expect a trend of early diagnosis over the years. It is in this context this study was conducted to know whether a change in the stage of carcinoma breast was seen during the last 6 years. 150 patients with a histopathological diagnosis, presenting to the Breast clinic conducted by the Department of Surgery, Calicut Medical College during the year 1997 were analysed. Similar number was selected for 2003 also. The records of these patients were carefully studied and analysed and statistically relevant aspects noted.

The mean age of presentation of cases in the year 1997 was 49.7 years and the median value of age was 47 years. In the year 2003 the mean age of presentation was 49.7 years and the median value of age 47 years. This means that there were no change of age of presentation during the last 6 years. The duration of symptoms in the patients detected of having carcinoma of the breast in the year 1997 averaged 92.26 weeks and the median duration of symptoms was 14 weeks. The mean duration of symptoms in women having Carcinoma of the breast in 2003 was 63.5 weeks and the median duration was 20 weeks. The proportion of cases in the various stages of Carcinoma breast for the year 1997 and 2003 is documented in the table given below.

| Stage of Ca. Breast upon detection | 1997 | 2003 |
|------------------------------------|-------|-------|
| STAGE I | 9.5% | 12.9% |
| STAGE II | 21.6% | 30.7% |
| STAGE III | 39.8% | 47.1% |
| STAGE IV | 29.1% | 9.3% |

Stages I and II together is considered as low stage and it is seen that 31.1% of the patients reporting in 1997 were in the low stages of the disease, while in the year 2003 the patients reporting in the low stages was 43.6%. The final diagnosis of the cases in the year 1997 and 2003 is mentioned in the table below

| Type of Carcinoma Breast | 1997 | 2003 |
|-----------------------------|-------|-------|
| Infiltrating duct carcinoma | 86.5% | 93.6% |
| Lobular carcinoma | 9.5% | 2.1% |
| Others | 4% | 4.3% |

The statistics clearly shows that the age of patients did not have a significant change although there was an increase in number of cases in the age group below 30 years and 30-40 years. This trend could be due to the fact of earlier puberty and later marriages in our society at present . The duration of symptoms at the time of presentation remained the same and no marked difference was seen over the years .An encouraging trend is seen with more number of cases being detected at stages I and II in the year 2003 in comparison with the year 1997. A definite drop is also seen in the number of cases presenting at stage IV in 2003 in comparison to the year 1997. The figures could be suggestive of the fact that self-awareness is rising and earlier detection is taking place. The incidence of lobular carcinoma of the breast has decreased over the years and a rise in infiltrating duct carcinoma is seen. This trend however needs to be further analysed before a proper conclusion can be made to suggest a change in incidence .A good social awareness could bring a drastic change in the future as earlier detection guarantees better prognosis for a sizeable portion of women afflicted with carcinoma of the breast.



Side effects of Cytotoxic drugs in children with malignancies

Sujith M Thomas, Sreekanth Kumar, Sujity Janardhanan, Aravindan KP
Dept of Community Medicine, Medical College, Calicut

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Leukemia is a common childhood malignancy. 95% of leukemias are of acute variety. Recently many anti cancer drugs have become available, which can effectively counter this condition. But with the effectiveness of the drug unwanted effects also assume importance, often changing the profile of the children. This adds to the worry of the sick children and their parents. Side effects commonly encountered with the cytotoxic drugs depend on the type of drug, dosage and route of application. The common side effects are - extravasations of IV drugs, oral mucositis, hyperuricemia, nausea and vomiting, Bone marrow suppression, Alopecia and effects on the reproductive organs. It is in this context that we decided to look at the side effects of cytotoxic drugs among children (2-10 yrs) receiving anti malignancy drugs from IMCH Calicut during NovDec-2003.

Design - Cross sectional study. 30 children who were receiving anti malignancy drugs for more than one month were selected for the study.

Cases analysed belonged to ALL L1 (12) ALL L2 (13) and AML M2 (5) .

The commonly used drugs were Vincristine, Methotextrate, Adriamycin and Prednisolone for induction and 6 - Mercaptopurine, Methotextrate and vincristine for continuation therapy.

| Side effects | Number | % |
|-------------------|--------|------|
| Alopecia | 24 | 80 |
| Mucositis | 21 | 70 |
| Vomiting | 21 | 70 |
| Diarrhea | 4 | 13.3 |
| Anaemia | 4 | 13.3 |
| Haematuria | 4 | 13.3 |
| Thrombocytopaenia | 3 | 10 |
| Neutropaenia | 3 | 10 |
| Cirrhosis | 1 | 3.3 |

Since , some of the side effects were subjective , mentioned by the patients themselves , the numbers may not reflect real incidence . However a prior knowledge about anti malignancy drugs and their complications will help parents of children to have a balanced view rather than worrying. Physicians should spend a little more time in alleviating the apprehensions of the patients and their parents.

Evaluation of the risk of Carcinoma Colon

Sajeeb K P, Sreeram Sankar, Yogesh Kumar Sharma, Jayin Jacob
Dept of Community Medicine, Medical College, Calicut

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Colon cancer was considered a relatively alien entity in our society with its diverse culinary dishes rich in various antioxidants and more importantly the fibre content. Newer trends and urbanisation has led to lifestyle changes and other neo culinary mannerisms which have also given rise to morbid conditions like colon cancer. Western statistics have shown undisputable relationships between their dietary pattern and the risk of contracting colon cancer, which accounts for the second spot among patients with cancer morbidity. India is seeing an increase in newer cases of colon cancer over the past decade associated with the changing diet & lifestyle more akin with the west. The use of highly processed food products and decrease in natural dietary fibre is now being seen in our society. A study was conducted with the aim of evaluating the relationship between dietary pattern and its correlation with colon cancer. The study conducted had a case group of 25 patients and 25 controls. The study revealed that the fibre intake was decreased in 72% of cases in comparison with the control group. Red meat intake was increased in the case group with 80% consuming it, while the control group had 30% users. Skipping of meals were noted in 68% and irregular meal timings in 64% of the case group. The incidence of diabetes was high in the case group with 60% suffering from it. The hereditary factor showed a 40% predisposition in the case group with colon cancer. The use of tobacco in the case group was 80% and alcohol consumption in the case group was 52%. The frequency of visiting restaurants was more in the case group with 80% being very frequent visitors. The use of white meat & sea food was noted in around 12%. The study clearly points out to the fact that the intake of fibre is markedly decreased in the case group which is on par with previous studies. The use of red meat, processed foodstuffs & high consumption of saturated fats (restaurant meals) is also a significant risk factor according to the study. An interesting fact is that the brunch culture & skipping of meals is more markedly seen in the case group. The use of tobacco and incidence of colon cancer was seen to be on the higher side which does suggest a correlation. Though the observations point out many factors which contribute to the incidence of colon cancer, further studies have to be conducted to corroborate the trends seen, as many factors run in parallel in the case group. However, the alarming effects of the dietary changes taking place in our society are too obvious. The decreased fibre intake & deviations from traditional time tested food patterns are a serious threat to the society and health system as a whole. Awareness to this regard is still very minimal and the lack of initiative on the part of health authorities to control the rise of undesirable trends and to promote healthy lifestyles is pitiable.

Mosquito profile in Calicut Medical College Campus

Jisna Muhammed, Juvaina P, Nishita S, Bhasker Rao
 Dept of Community Medicine, Medical College, Calicut

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Epidemics of mosquito born diseases are occurring even today. Diseases like dengue fever, Japanese encephalitis and Malaria are being reported from different parts of India and also from Kerala. With the decrease in the environmental health, the mosquito density increases in all these places. Apart from density, the type of mosquito depend on the breeding sites. The Calicut Medical College campus is a typical urban setting in Kerala. It is in this context that we decided to study the profile of mosquitoes in this campus.

Design- Cross sectional design

2 structures were identified in the campus for the collection of the mosquitoes. In each identified structure one room was identified as a fixed collection center and second room was selected as random center. Duration of collection was one hour between 6 and 7 pm in the evening. Torch and test tube were used as the methods for collection. Mosquito's collected were identified in the laboratory and per man-hour density (PMD) was calculated.

Results are given in table 1 and Table 2

Table-1 Per man-hour density of Mosquito

| Date of collection | No of mosquito's collected | Per man hour density |
|--------------------|----------------------------|----------------------|
| 22-10-03 | 18 | 3 |
| 23-10-03 | 31 | 5.17 |
| 27-10-04 | 43 | 7.17 |
| 28-10-03 | 26 | 4.33 |
| 29-10-03 | 44 | 7.33 |
| 30-10-04 | 37 | 6.17 |
| 31-10-03 | 35 | 5.83 |
| Total | 234 | 5.57 |

Table- 2 Mosquito profile

| Mosquito identified | No of mosquito identified | Average PMD |
|---------------------|---------------------------|-------------|
| Culex | 224 | 5.33 |
| Aedes | 9 | 0.21 |
| Anopheles | 0 | 0 |
| Mansonia | 0 | 0 |

The study shows that the major genus of mosquito in this area was culex. Aedes mosquito was also collected, but in a lesser numbers. Anopheles and Mansonia were not found. This could be due to the fact that no breeding sites suitable for mansonia and anopheles were identified in the campus. The high density of culex may due to the lack of proper drainage system in the campus. The low numbers of Aedes may be due to the seasonal factors.

Presentation of Enteric fever in Calicut Medical College during 2003.

Jyothish George, Shafi Ijas, Sameer saleem, Thomas Bina
Department of Community Medicine, Calicut Medical College

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India is endemic for typhoid fever. There are reports from urban slums which cites 1% of children under 17 years of age suffer from typhoid fever every year. Predominant symptom of presentation of this illness is classically said to be prolonged fever. The second common symptom is abdominal pain. Presentation of typhoid fever in an atypical way is increasingly reported. Because of the symptom variation the diagnosis of the condition is difficult. In this context we have tried to study the pattern of symptoms of serology / culture confirmed cases of typhoid fever admitted to this hospital during Nov-Dec 2003.

Design-Case series. Serology / culture positive cases were selected and their case records were analyzed for symptoms at presentation.

84% of subjects were males. There was a history of travel for 48% of the subjects.

The common symptoms were recorded as follows.

| Symptoms | Number | Percentage |
|----------------------|--------|------------|
| Fever | 25 | 100 |
| Chills and rigor | 19 | 76 |
| Headache | 18 | 72 |
| Vomiting | 14 | 56 |
| Myalgia | 13 | 52 |
| Diarrhea | 9 | 36 |
| Cough | 9 | 36 |
| Abdominal pain | 8 | 32 |
| Constipation | 4 | 16 |
| Epistaxis | 2 | 8 |
| Abdominal distension | 1 | 4 |
| Rose spots | 1 | 4 |

The present study shows that the presentation typhoid fever is still in a classical way. . The percentages of rose spots are comparatively less than that reported by many western studies.

Risk factors of contact dermatitis

Deepthi V, Deepthi mani, Dhanya KV, Vijayakumar K
 Dept.of Community Medicine, Medical College, Calicut

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Contact dermatitis is one of the most common skin diseases in our locality. It is an inflammation of the skin caused by direct contact with an irritating or allergy causing substance. Irritant dermatitis, the most common type of dermatitis involves inflammation resulting from contact with acids, alkaline materials such as soaps and detergents, solvents, or other chemicals. The second most common type of contact dermatitis is caused by exposure to hypersensitive or allergic materials. The purpose of the study was to find out the risk factors associated with contact dermatitis among women.

A case control study was done with 50 diagnosed cases of Contact dermatitis from dermatology OP. Control were selected from the bystanders in the hospital wards. Association between the contact dermatitis and history of atopy, childhood allergy, food, family, drug and disease were collected. Metals contributed to 24.1% of cases. Plastic (22.2) Fabric (16.7%), rubber (13%) Detergents (13%), tooth powder (3.7%) and cosmetics (1.7) were identified as the causative agents.

Table 1- Odds ratio of risk factors

| Variable | Odds ratio | 95% CI |
|----------------------------|------------|-------------|
| Atopic history | 2.9 | 1.00 - 7.00 |
| Family history | 2.9 | 0.80 - 9.80 |
| Childhood allergic history | 2.5 | 0.72 - 8.80 |
| Insect bite | 2.1 | 0.50 - 9.10 |
| Pets | 1.4 | 0.40 - 5.00 |
| Drug History | 3.1 | 0.30 - 31.1 |
| Food history | 2.5 | 0.70 - 8.80 |

It is clear from the table that atopic history, drug history and family history are the most important factors in the development of allergic dermatitis.

Determinants of Ulcer negative dyspepsia

Jasmine Yoosuf, Jinu Annie Jose, Rohan Raj, Jayin Jacob, Ravi Prasad Varma
Dept of Community Medicine, Medical College, Calicut

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Ulcer negative dyspepsia is a chronic abdominal symptom often dominated by epigastric discomfort, not associated with any abnormality on radiographic or endoscopic examination. Ulcer negative dyspepsia is relatively common in our social setup. Changing food habits and the use of spicy food, which is the hallmark of Indian cuisine may have a bearing on the dyspeptic symptoms. This study was conducted to find out the association of Ulcer negative dyspepsia with the food habits of a section of Keralite population.

A case control study consisting of 60 individuals was undertaken with 30 control individuals and 30 cases. The cases were selected from subjects who have dyspeptic symptoms reporting to gastroenterology clinic. Only those subjects who were categorized as ulcer negative after endoscopy were selected as cases. The controls were selected from medical wards who were not having dyspeptic symptoms or history of peptic ulcer. A questionnaire based interview was conducted covering all the 60 people and conclusions were drawn.

Among the 60 people interviewed 35 were males and 25 were females. 70% of the case group had symptoms for a period of more than 2 years. Non- vegetarians constituted 96.7% of the case group, while they formed only 46.7% of the control group. While both groups were used to spicy food, the frequency of taking spicy foods differed. 85.2% of the case group took spicy food on a daily basis compared to the control group where 58.6% were consumers of spicy food on a daily basis. Occasional use of spicy food was seen in a population of 24.1% in the control group while only a meager 3.7% of the case group were occasional users .

Intake of Chinese food was found to be more prevalent among controls than cases. 46.7% of the controls and 20% of the cases took Chinese food. Intake of packed foodstuffs was found to be high among controls -73.3% compared to the cases- 53.3%. It is seen that the frequency of intake was more among controls than cases. Bakery food intake was found to be equal in both the categories -96.7%. Fatty food intake was found to be 83.3% for the cases and 93.3% for the controls. Soft drink (aerated) consumption was 26.7% in the study group, which formed 16.7% of cases and 36.7% were controls. Lime and fruit juice were reported to be consumed by 96.7% of the cases and 93.3% of the controls. 41.4% of the cases and 37.9% of the controls were taking them daily. Tea and coffee consumption was equal with 96.7% of both the study and control groups taking it with similar frequency of intake.

The frequency of intake of spicy food was found to be having a significant association with the occurrence of dyspeptic symptoms .85.2% of the case group were consuming them before the onset of symptoms as compared to 58.6% in the control group. The various other factors like fatty food consumption and excessive intake of tea and coffee have been shown to trigger symptoms in other studies but no conclusive evidence was seen to support the claims in this study.

The study showed an undisputable correlation between the onset of ulcer negative dyspepsia and the increased consumption of spicy foodstuffs. The use of spicy foodstuffs as a forerunner of ulcer negative dyspepsia should be a point for health education , while managing cases of Dyspepsia.

Causes of Pediatric Mortality in IMCH Calicut during 2001

Hariprasad PM, Juman CP, Vijayakumar, Biju George
 Department of Community Medicine, Calicut Medical College

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Infant mortality rate in India is stated to be around 70 while that of Kerala is 14 per 1000 live births. The figure in developed countries will be generally less than 7/1000 live births. Depending on development of community the causes of mortality among infants and children differs. The principal causes of infant mortality in India are Low birth weight, Respiratory Infection Acute diarrhoeal disease and Cord infection, while in Developed countries congenital anomalies, and hypoxic encephalopathy leads the list. Similarly infections are the principal cause of death among the 1-4 year in India in comparison with accidents, congenital anomalies and malignancies in western world. Obviously the causes of mortality among infants and children in developing county context are more amenable to intervention than that of the developed countries. It is in this context that the causes of pediatric death as recorded in IMCH Calicut are being studied. As a public sector hospital the center is accessible to all sections of the society. Being a tertiary care center, patients especially those with severe and advanced disease will be referred here. Kerala is a society with high utilization of health care and hospital deaths can very well reflect the picture in the community.

A cross sectional analysis of the records of year 2001, kept in record library of IMCH Calicut was done with an upper age cut off at 12 years.

Table 1 : The age and sex distribution of pediatric death

| Age group | Male | | Female | | Sex not recorded | Total | |
|---------------|------|-------|--------|------|------------------|-------|-------|
| | n | % | n | % | | n | % |
| New born | 376 | 65.5 | 289 | 68.5 | 15 | 680 | 66.93 |
| Post neonatal | 86 | 14.98 | 69 | 16.3 | 25 | 157 | 15.45 |
| 1- 5 yrs | 53 | 9.2 | 40 | 9.4 | 0 | 93 | 9.1 |
| 5-12 yrs | 53 | 9.2 | 22 | 5.2 | 3 | 78 | 7.7 |
| Unknown | 6 | 1.04 | 2 | 0.05 | 0 | 8 | 0.08 |
| Total | 574 | 100 | 422 | 100 | 43 | 1016 | 100 |

Of the total death in 0 -12 years 57.6% were boys and the rest girls. This indicate the vulnerability of the male population. 81.24% of the deaths in infancy occurred in the newborn period. Similarly 2/3rd of all deaths in the 0-12 year age occurred in the newborn period. Because of its peculiar reasons, further gains in the reduction of the mortality among children will not be as smooth as we have experienced so far.

Table 2 :Common causes of death during newborn period

| Cause | Male | | Female | | Sex not recorded | Total | |
|----------------------|------|------|--------|------|------------------|-------|------|
| | n | % | n | % | | n | % |
| Low birth weight | 25 | 6.6 | 14 | 4.8 | | 39 | 5.7 |
| Pre-term | 123 | 32.7 | 125 | 43.2 | 7 | 255 | 37.5 |
| Congenital anomalies | 39 | 10.4 | 26 | 9 | 1 | 66 | 9.7 |
| Birth asphyxia | 39 | 10.4 | 23 | 7.9 | 1 | 63 | 9.3 |

| | | | | | | | |
|---------------------------|-----|------|-----|------|----|-----|------|
| Septicemia | 25 | 6.6 | 13 | 4.5 | 1 | 39 | 5.7 |
| Cardio respiratory arrest | 30 | 8 | 15 | 5.2 | 1 | 46 | 6.8 |
| Others | 95 | 25.3 | 73 | 25.2 | 4 | 172 | 25.3 |
| Total | 376 | 100 | 289 | 100 | 15 | 680 | 100 |

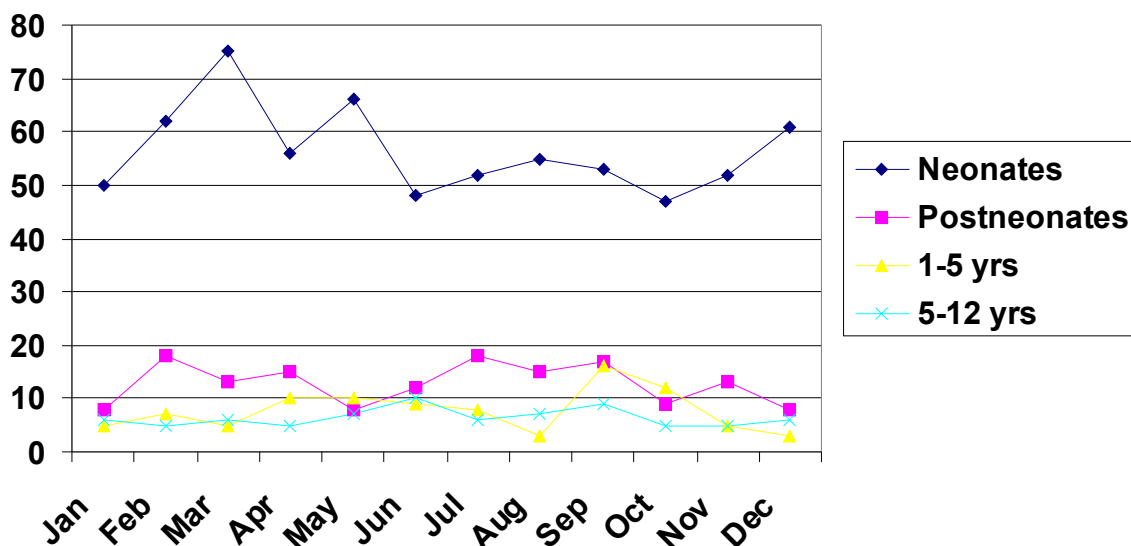
37.5% of the death occurred due to prematurity and 9.6 % of the death occurred due to congenital anomalies. Low birth weight contributed to 5.7 % of the deaths. Diagnosis recorded in the register may have some inherent inadequacies. Therefore too much details cannot be interpreted.

Table 3: Common causes of death in post neonates and under 12 year old children

| Cause | 1/12 - 12/12 | | 1-5 yrs | | 5-12 yrs | |
|-----------------------|--------------|------|---------|------|----------|------|
| | n | % | n | % | n | % |
| Respiratory infection | 27 | 15.4 | 10 | 10.7 | 5 | 6.3 |
| Respiratory distress | 14 | 8 | 4 | 4.3 | 0 | 0 |
| Congenital anomalies | 33 | 18.9 | 5 | 5.3 | 1 | 1.3 |
| Septicemia | 22 | 12.6 | 9 | 9.6 | 4 | 5.1 |
| Meningoencephalitis | 9 | 5.1 | 22 | 23.6 | 0 | 0 |
| Neoplasms & Lukemia | 3 | 1.7 | 16 | 17.2 | 16 | 20.3 |
| Accidents | 0 | 0 | 0 | 0 | 13 | 16.5 |
| Others | 67 | 38.2 | 27 | 29 | 40 | 50.6 |
| Total | 175 | 100 | 93 | 100 | 79 | 100 |

It is clear from the above table that during post neonatal period congenital anomalies and septicemia tops the causes of death, while in 1-5 yrs old children meningoencephalitis assumes utmost importance. Neoplasms & leukemia, Respiratory infection and septicemia follow it. Accidents and malignancies account for more than 1/3rd death in the 5-12 yr old table.

Figure 1 : Seasonality of death



There is a slight increase in the neonatal death in the February and March. In l other age groups gross fluctuation does not occur. Number of deliveries conducted in this hospital generally show an increase during February to April and peak in neonatal death will have to be interpreted along with this.

It is clear from this study that 2/3rd of the pediatric deaths under 12 year occur in newborn period. Male mortality exceeds that of female in all age groups. Most common cause among newborn is pre-term. Congenital anomalies, malignancies and accidents assume greater importance as age increases. Further reduction in child mortality can only be achieved by developing strategies to compact these issues.

Nutritional Status of Primary School Children in Calicut

Swapna Dominique, Nisha Balan, Vineetha Raghaven, Biju George
Dept of Community Medicine, Medical College, Calicut

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India always has had the dubious distinction of being portrayed as a country where poverty is rampant. One cannot hide the fact that Protein Energy Malnutrition

(PEM) is one of our major nutritional problems. Side by side with Protein Energy under nutrition, cases of overnutrition are also being reported especially from the urban population. With the advent of non-communicable disease epidemics, under nutrition is often underplayed in the Kerala scenario. It is in this context the present study was carried out. The study aimed at ascertaining the nutritional status of 235 school children in a Govt. Upper Primary School to know whether any relation exists between the current nutritional status of children and the age of mother, time of delivery, educational status of parents and birth weight of the child. The height and weight of the students of class I to IV was taken and was compared with NCHS standards. Of the 235 students 41.7% were girls. It was found that 21.7% of the students were underweight (18.36% were girls 24.07% were boys). 18.3% were moderately malnourished while 3.4% were severely malnourished. 7.23% of the children showed stunting of growth. (9.4% of boys and 4.08% of girls). 6.81% had moderate stunting and 0.43% showed severe stunting. 27.23% of the children had features of wasting (31.39% of boys and 21.43% of girls). 20.85% were having moderate wasting and 6.38% had severe wasting. These values are suggestive of the fact that, acute malnutrition rather than chronic malnutrition is the present problem in our community. There seems to be definite decrease in the proportion of under malnourished children as the age advances. These observations are in accordance with earlier such studies reported in Indian Scenerio . The study also showed that girls are healthier than boys, which is also a trend noted by workers from China, Malyasia and Nigeria. The study also showed that the nutritional status of the child depends on the mother's educational status. An educated mother is always in a better position to give a balanced diet, as she is aware of the consequences of malnutrition. Moreover maternal education will be a surrogate index of social development also. The study gives an insight that though Kerala is considered to be at par with developed countries with regards to its mortality status, acute malnutrition seems to be a reality. The problem of malnutrition can be resolved with a proper policy and implementation of existing schemes in their full capacity