

Risk Factors for Acute Myocardial Infarction in Central India: A Case-Control Study

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ABSTRACT

Background: Atherosclerosis is a multi-factorial disease involving the interplay of genetic and environmental factors. Studies highlighting the public health importance of risk factors like chronic infections causing acute myocardial infarction (AMI) in the Indian context are scarce. This study was undertaken to study the association of socio-demographic and life-style factors with acute myocardial infarction in central India. **Materials and Methods:** The cases and controls were group-matched for age, gender, and socio-economic status. A blinded research associate administered the study questionnaire. We performed an unconditional multiple logistic regression analysis. **Results:** The case-control study included 265 cases of AMI and 265 controls. The results of final model of logistic regression analysis for risk factors of AMI included 11 risk factors at $\alpha = 0.05$. They were waist hip ratio, body mass index, stress at home in last 1 year, hypertension, family history of CHD, past history of gingival sepsis, tobacco smoking, raised total serum cholesterol, *Chlamydia pneumoniae*, *Helicobacter pylori* and raised C-reactive protein. **Conclusion:** The findings confirm the role of conventional risk factors for cardiac disease and highlight need for research into the association between chronic infections with AMI.

Keywords: Atherosclerosis, acute myocardial infarction, risk factors

Air Nicotine Levels in Public Places in Ahmedabad, India: Before and After Implementation of the Smoking Ban

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ABSTRACT

Aim: To compare air nicotine levels in public places in Ahmedabad, India, before (June 2008) and after (January, 2010) the implementation of a comprehensive smoking ban which was introduced in October 2008. **Materials and Methods:** Air nicotine concentrations were measured by sampling of vapor-phase nicotine using passive monitors. In 2008 (baseline), monitors were placed for 5-7 working days in 5 hospitals, 10 restaurants, 5 schools, 5 government buildings, and 10 entertainment venues, of which 6 were hookah bars. In 2010 (follow-up), monitors were placed in 35 similar venues for the same duration. **Results:** Comparison of the overall median nicotine concentration at baseline (2008) ($0.06 \mu\text{g}/\text{m}^3$ Interquartile range (IQR): 0.02-0.22) to that of follow-up (2010) ($0.03 \mu\text{g}/\text{m}^3$ IQR: 0.00-0.13), reflects a significant decline (% decline = 39.7, $P = 0.012$) in exposure to second-hand smoke (SHS). The percent change in exposure varied by venue-type. The most significant decrease occurred in hospitals, from $0.04 \mu\text{g}/\text{m}^3$ at baseline to concentrations under the limit of detection at follow-up (% decline = 100, $P < 0.001$). In entertainment venues, government offices, and restaurants, decreases in SHS exposure also appeared evident. However, in hookah bars, air nicotine levels appeared to increase ($P = 0.160$). **Conclusion:** Overall, SHS exposure was significantly reduced in public places after the smoke-free legislation came into force. However, nicotine concentrations were still detected in most of the venues indicating imperfect compliance with the comprehensive ban.

Keywords: Air nicotine monitoring, second-hand smoke, smoke-free law, smoking ban

Determinants of Patient's Adherence to Hypertension Medications in a Rural Population of Kancheepuram District in Tamil Nadu, South India

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ABSTRACT

Context: Non-communicable diseases, no longer a disease of the rich, impose a great threat in the developing nations due to demographic and epidemiological transition. This increasing burden of non-communicable diseases and their risk factors is worrisome. Adherence to hypertension (HT) medication is very important for improving the quality of life and preventing complications of HT. **Aim:** To study the factors determining adherence to HT medication. **Settings and Design:** A community-based cross-sectional study was conducted in a rural area of Kancheepuram district, Tamil Nadu, with a total population of around 16,005. **Materials and Methods:** This study was carried out over a period of 6 months (February-July) using a pre-structured and validated questionnaire. All eligible participants were selected by house-to-house survey and individuals not available on three consecutive visits were excluded from the study. The questionnaire included information on demographic characteristics, lifestyle habits, adherence to HT medication, blood pressure, and body mass index (BMI). Caste was classified based on Tamil Nadu Public Service commission. **Statistical Analysis:** Data were entered in MS Excel and analyzed in SPSS version 16. P value <0.05 was considered statistically significant. **Ethical Consideration:** Informed verbal consent was obtained prior to data collection. The patient's adherence to HT medication was assessed using the Morisky 4-Item Self-Report Measure of Medication-taking Behavior [MMAS-4]. **Results:** We studied 473 hypertensive patients of which 226 were males and 247 were females. The prevalence of adherence was 24.1% ($n = 114$) in the study population. Respondents with regular physical activity, non-smokers and non-alcoholics were more adherent to HT medication as compared with respondents with sedentary lifestyle, smoking and alcohol intake ($P < 0.005$). Based on health belief model, the respondents who perceived high susceptibility, severity, benefit had better adherence compared with moderate and low susceptibility, severity, benefit.

Keywords: Health belief model, hypertension, non-adherence, rural area

Accuracy of Visual Assessment by School Teachers in School Eye Screening Program in Delhi

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ABSTRACT

Background: Although school eye screening is a major activity of the National Program for Control of Blindness, inadequate evidence exists about accuracy of school teachers in screening. **Objectives:** Compare quality of referral for subnormal vision by school teachers and primary eye care workers (PECW) in school children and to establish appropriate cutoff for identification of subnormal vision in school going children. **Materials and Methods:** This was a cross-sectional study involving school children studying in classes 1 to 9 in different schools of Delhi evaluated for sub-normal vision. Vision was recorded by the teacher and a primary eye care worker especially trained for the study using the optotypes of Early treatment Diabetic Retinopathy Survey (ETDRS) vision chart with standard lighting. **Results:** The total number of children enlisted in the 20 selected schools was 10,114. Of these, 9838 (97.3%) children were examined in the study. The mean age of children enrolled in the study was 11.6 ± 2.19 years with 6752 (66.9%) males. The sensitivity and specificity of teachers in comparison to PECW using 6/9.5 vision level as cutoff for referral was 79.2% and 93.3%, respectively compared to 77.0% and 97.1%, respectively on using the 6/12 optotype. The results showed significantly higher sensitivity and lower specificity for private schools against government schools and for older against younger children. **Conclusions:** Our results show that the use of teachers and shift to use of the 6/12 sized “E” for the school eye screening (SES) program is appropriate and would substantially reduce the work of eye care providers while improving its overall efficiency.

Keywords: Accuracy, national program for control of blindness, refractive errors, school eye screening, sensitivity and specificity

Prevalence and Correlates of Metabolic Syndrome in the Adolescents of Rural Wardha

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ABSTRACT

Background and Objective: Metabolic syndrome is a major concern as a precursor of cardiometabolic diseases. The present study was designed to study the magnitude and correlates of metabolic syndrome among the adolescents of rural Wardha. **Materials and Methods:** A cross-sectional study was carried out among the adolescents (10-19 years) of Anji PHC. A sample of 405 was selected by random sampling from the sampling frame available with department of Community Medicine. We collected data about their sociodemographic variables and other cardiometabolic risk factors. Fasting blood sample was collected to measure lipid profile and blood glucose. Blood pressure and anthropometric measurements (height, weight, and waist circumference) were also taken. **Results:** Prevalence of metabolic syndrome using ATP-III criteria modified for adolescents was found to be 9.9% (95% CI: 7.3-13.1) in the study population and lower level of high-density lipoprotein (HDL) cholesterol was found with a prevalence of 58.3% (95% CI: 53.4-63.0). The prevalence of metabolic syndrome was found to be significantly ($P < 0.05$) associated with the presence of obesity and hypertension among family members. **Interpretation:** There was a moderately high prevalence of metabolic syndrome among rural adolescents. **Conclusion:** The early identification of cardiometabolic risk factors such as hypertension and obesity can help prevent metabolic syndrome, diabetes, and cardiovascular disease.

Keywords: Adolescent, metabolic syndrome, dyslipidemia

Mainstreaming of Emergency Contraception Pill in India: Challenges and Opportunities

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ABSTRACT

Background: Emergency Contraception Pill (ECP) is an essential intervention to prevent unwanted pregnancies. However, its use has remained low due to various barriers including reservations among medical fraternity. **Materials and Methods:** This paper presents findings on barriers to ECP's easy access for potential users from (i) a cross-sectional survey of providers' attitudes, beliefs, and practices and interviews with key opinion leaders, (ii) three consultations organized by Population Council with policymakers and public health experts, and (iii) evidence from scientific literature. **Results:** The major barriers to easy access of ECP include misconceptions and reservations of providers (disapproval of ECP provision by CHWs, opposition to its being an OTC product, and myths, misconceptions, and moral judgments about its users) including influential gynecologists. **Conclusion:** For mainstreaming ECP, the paper recommends educational campaign focusing on gynecologists and CHWs, relaxing restrictive policy on advertisement of ECP, involving press media and strengthening supply chain to ensure its regular supply to ASHA (CHW).

Keywords: Easy access, emergency contraception, family planning, levonorgestrel, provider barriers

Major Sites of Cancer Occurrence Among Men and Women in Gandhinagar District, India

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ABSTRACT

Background: This study examines major cancer sites among the population of Gandhinagar district, India during the year 2009-2011. **Objective:** To study leading cancer incidents and mortality and their age distribution in both sexes in Gandhinagar district. **Materials and Methods:** Primary data were collected from various sources and entered in computer and analyzed. Quality checks were done, and duplicate cases were eliminated. For mortality data, death registration units were contacted. **Results:** Total 2360 incident cases (1374 males and 986 females) and 736 mortality cases (464 males and 272 females) were recorded during the year 2009-2011 in Gandhinagar district. Among males, the leadings sites were mouth, tongue, lung, esophagus, hypopharynx, and larynx, whereas in females they were breast, cervix, ovary, mouth, tongue and myeloid leukemia. Majority of cases were found in the age group of 35-64 years and the proportion in male and female in this age group was 62.51% and 71.05%, respectively. **Conclusion:** The study helps to understand the possible cancer patterns in Gandhinagar district. Foremost causes of cancer in leading sites in males were tobacco related, and the proportion of cancers associated with tobacco was 53% in our study. It highlights the possibility of easy and early detection of cancers, especially by oral cancer screening in the population. Further, the findings highlight the need of cancer cervix and breast screening among the women at regular intervals through camp approach in the community, as these are the most common sites (40% of female cancers).

Keywords: Population based cancer registry, age, gender, incidence, mortality, Mortality/incidence% (M/I%) ratio

Newborn Hearing Screening: Present Scenario

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ABSTRACT

In 2009 many countries of the world met to discuss newborn and infant hearing screening current issues and guiding principles for action under World Health Organization (WHO) banner, though most of the countries who had begun this work as universal program or high risk screen do not have exact data and protocol. The developing countries also decided to become part of it and common guideline was proposed. India being part of it included hearing screening as one of the 30 diseases to be screened under Rashtriya Bal Swasthya Karyakram (RBSK). This article discusses all these issues of newborn hearing screening in the world and India.

Keywords: Hearing screening, neonatal hearing screening, Rastriya bal swasthya karyakram 2013, TEOAE