A comparative study on the prevalence of occupational respiratory symptoms age wise in male and female labourers of cement industries in Tadipatri Mandal of Anantapur District, Andhra Pradesh

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SUMMARY

Assessment has been made on the respiratory disorders in male and female labourers of age groups 20-35 (younger), 36-45 (middle) and 46-55 (older) years of cement industries in Tadipatri Mandal of Anantapur District. Clinical data were established with the case study on history and clinical symptoms. This clinical database was prepared based on the survey conducted among 18515 long-term exposed groups of labourers. Much attention was paid to bring the correlation between smoking habit and occupation exposure response of respiratory system among labourers of these three age groups. Major respiratory symptoms prevalent were dysponea (78.79%), asthma (22.77%), and cough (productive and non productive cough) (23.50%). Dysponea (23.50%) was identified as major symptom in males and asthma (28.04%) in females. Middle age group of male labourers (41.65%) and younger age group of female labourers (46%) were the major suffers due to repeated long term exposure; prevalence of developing asthma (69%) was more in younger and middle age group of male labourers. Current smokers of younger age group were at higher risk of developing chronic bronchitis and wheeze but not asthma. Chronic cough (13.53%) was the common symptom in both sexes exposed to dust and male labourers were at higher risk for developing productive cough and attacks of dysponea. Incidences of respiratory symptom were high in females than men, after adjusting for age and smoking habit.

Key words : Dysponea, Wheezing, Asthma, Productive and non productive cough

The cement industry in Anantapur district comprises mainly two major plants in private sector with an installed capacity of 2000 tones per day (tdp). The major raw materials required for the industry are limestone, clay, coke and gypsum. The raw materials are procured within the industry mining belt, except the coke. The major environmental issues of the cement industry are Gaseous emissions (from kiln containing particulate matter, CO_2 NOX, SO_2, etc.), Dust emissions (eaw mill, conveyor transfer points and packing unit), Fugitive emissions (refuse burning of tires and blasting of mines) and occupational safety and health

No studies have earlier been made on the occupational health hazards of the labourers of this industry. Hence, the present study was carried out in labourers of male and females of three age groups as 20-35, 36-45 and 46-55 attending Government Medical College Hospital, Anantapur. A hospital based survey was taken up to eliminate healthy workers effect (Helga and Levis, 1987). (Selection of workers with better health by pre-placement examination).

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MATERIALS AND METHODS

The present study is a comparative study aimed to explore the respiratory morbidity in terms of symptoms in chronic exposed labourers working in cement industry for more than 11 years. All out patients N=18515 (Male: Female=9899:8616 attending Medical College Hospital in Anantapur district, Andhra Pradesh) were considered for the study during the period May 2006 to April 2008. The total strength of the labourers were categorized according to the age (Table 1, 2, 3 and 4) which included younger (20-35), middle (36-45) and older (46-55) (Table Fig. 1a and b). The ages of exposed subjects were comparable. Labourers having respiratory problems like chest pain, dysponea, problems with nose and throat, cold, breathing problem, asthma, productive and non

Table 1 : Distribution of male and females in all three age groups [younger (20-35), middle (36-45), older (46-55)].

	Gender	
	Male	Female
Strength	9899	8616
Percentage	53.46	46.53
	Total 18515	