



# 9th MEETING OF THE MEDITERRANEAN BLOOD CLUB



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**PROGRAMME AND ABSTRACTS**



## INVESTIGATION OF ZINC DEFICIENCY IN PATIENTS WITH CHRONIC COR PULMONALE BY ORAL PLASMA ZINC TOLERANCE TEST

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In this study, plasma and hair zinc level were determined in 33 patients with chronic cor pulmonale and 11 healthy controls. Plasma and hair zinc levels in patients were significantly lower than the controls ( $p > 0.0001$ ). Zinc absorption was examined by oral plasma zinc tolerance test and comparing the results to healthy control group. The increase in plasma zinc were significantly lower in the patients than the control group ( $p < 0.0001$ ). In addition to these we have seen increase in urinary excretion of zinc. We can conclude that chronic cor pulmonale is frequently associated with zinc deficiency. The cause of zinc deficiency is due to both decreased absorption in the oedematus intestine and increased absorption and increased excretion from kidney.

## ENVIRONMENTAL EXPOSURE TO CADMIUM AND LEAD IN PEDIATRIC AGE GROUP

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Manisa, a city in the Aegean Province of Turkey, is a territory of world-wide famous viniculture and a region of dense industrial activity. Highway to Izmir, heavy with traffic passes through the city. Lead additives in automotive fuels (although government encourages use of unleaded-gasoline), smog from low quality coal burned in houses and industrial establishments and heavy tobacco smoking warranted an investigation on non-essential trace elements. Thus, 101 children who were admitted consecutively were screened in view of lead and cadmium exposure. Ingestion of paint chips of lead-based paints from deteriorated buildings, as seen in children in many countries, does not seem to be a problem in Manisa. However, such a screening has not been done in Manisa, as yet. Street repair soldering of kitchenware and use of lead plumbing systems in houses have long been discarded. Local people consume mostly fresh fruits and vegetables abundant in the region; not the preserved goods marketed in three-piece cans with Pb-soldered seams. Pb based-glaze in ceramic industry is prohibited. Such glaze in authentic pottery and ornaments are under strict control. Badges of notice, e.g. 'Not for storage of foodstuff' are always included. Lead is lately prohibited in cosmetic surma brought as souvenirs from Mecca; nevertheless surma use in children had never been a custom in our country. Cadmium is used as an anticorrosive agent, as a color pigment and PCV plastic stabilizer. Unfortunately, it is routinely used in galvanizing stove pipes, water pipes, and lately charcoal grill grates to keep them rust-free. As it is true throughout the world, tobacco smoking begins at early ages and is very prevalent in Manisa and passive smoking is unavoidable. In 23 of these children between the ages of 0-2 years the mean ( $\pm$ SEM) serum cadmium level was  $0.066 \pm 0.008$  mg/L, in 28 between the ages of 3-6 years was  $0.078 \pm 0.008$  mg/L and in 50 between the ages of 7-15 years was  $0.088 \pm 0.006$  mg/L. The difference in cadmium levels between the age groups of 0-2 years and 7-15 years was significant ( $p < 0.038$ ). Serum lead levels in the same groups of children were  $0.715 \pm 0.10$  mg/L,  $0.720 \pm 0.10$  mg/L ve  $0.720 \pm 0.10$  mg/L, respectively, with no significant difference. Conclusion: our study revealed that lead is not a serious environmental contaminant for children, as yet, in Manisa; however, the increasing trend seen in exposure to cadmium warrants serious consideration and urgent preventive measures.