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Title: SIDS and idiopathic ALTE: Genetic similarities

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Body: Backgtround: Recent advances in molecular genetics have opened new perspectives in the definition of pathogenic mechanisms of SIDS. Several studies, during the past decade, identified polymorphisms in the serotonin transporter (5HTT) (SLC6A4 encoding 5HTT) as a predisposing factor in infant death. Aim of the study: This project represents a significant step to add knowledge on the involvement of the serotonin polymorphisms of two different 5HTT regions (5-HTTLPR, hydroxytryptamine transporter-linked polymorphic region, and Stin2, intron 2 VNTR), the promoter region of MAOA (monoamine oxidase A), and DAT in an Italian SIDS population, ALTE patients, IALTE (idiopathic ALTE) and controls. Methods: We enrolled 76 infants with an history of Apparent Life Threatening Event, distingued in Idiopathic ALTE (IALTE) and Non Idiopathic ALTE (ALTE) by clinical, diagnostic and therapeutic data (12 channels polysomnography E-Series Compumedics). Genotypes and allelic frequencies of DAT, MAOA and 5HTT were determined in ALTE and IALTE infants compared with data obtained from 150 healthy controls. Results: No association was found between DAT polmorphysm and ALTE/IALTE groups either in the genotype (p=0.25; p=0.112) nor in the allelic frequence (p=0.94;P=0.88). The comparison of MAOA genotypes and allelic frequence between ALTE and control group was not significant, on the opposite the comparison between IALTE and control group was statistically significant for the genotypes (P=0.09) and a tendency for allele (p=0.036). Analisys of 5HTT polymorphisms in IALTE remarked the pathogenetic role of L/L genotype (P<0.00001) and L allele (P<0.00001) as previously demostrated in SIDS.