

variations in blood pressure. Mediation analysis showed partial mediation by alcohol and tobacco which were statistically significant ($P < 0.001$). For instance, 17.8% of the reduction in systolic blood pressure associated with being female was mediated by alcohol use, while tobacco accounted for 22.1%. Education's effect on systolic blood pressure was mediated by 29.7% through alcohol and 27.3% through tobacco. The analysis also revealed that the people in the richer and richest quintiles had significantly higher level of systolic and diastolic blood pressure when compared to those in the poorer and poorest quintiles.

Conclusion

The study highlights the significant mediating roles of smoking and alcohol in the relationship between socioeconomic factors and blood pressure. These findings underscore the importance of integrating behavioural interventions into public health strategies to address hypertension and its risk factors effectively. Targeted approaches considering socioeconomic disparities and behavioral risks are crucial for improving cardiovascular health in diverse populations.

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P146

JOINT79

Management practices in Italy on adrenal insufficiency in young people with Duchenne muscular dystrophy on steroid treatment

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Background

The cornerstone of current pharmacologic management of Duchenne muscular dystrophy (DMD) is glucocorticoid (GC) therapy initiated at a young age. Chronic high-dose daily GC treatment causes adrenal suppression that can result in potentially life-threatening adrenal insufficiency (AI). Despite the potential severity of this complication, it is not known what guidance pediatric endocrinologists and neurologists in Italy provide regarding the risk of AI.

Methods

Online survey distributed via email to Italian endocrinologists and neurologists involved in the care of young people with DMD.

Results

A total of 35 physicians responded to the survey (57% endocrinologists, 43% neurologists). Most respondents (57%) managed between 11 and 50 patients, with neurologists caring for a greater number of patients than endocrinologists ($P = 0.013$). The most commonly used GC regimen was daily deflazacort (86%), followed by daily prednisone (26%), intermittent deflazacort (14%), and intermittent prednisone (3%). For minor stress (e.g., cold without fever), most respondents (80%) did not recommend any additional treatment, with a significant difference between neurologists and endocrinologists (93% vs. 70%, $P = 0.027$). For moderate stress (e.g., febrile illness, vomiting, diarrhea but able to take oral intake), 31% recommended oral hydrocortisone (HC), 17% suggested an additional dose of deflazacort/prednisone, and 9% recommended parenteral HC. In cases of major stress (e.g., painful long bone fracture, vomiting or diarrhea with inability to take oral intake, general anesthesia, surgery), 77% recommended parenteral HC, yet 14% still did not advise any additional treatment. Although 82% of respondents reported providing education on AI management (from endocrinology team in 41%, neurology team in 26%, both in 15%), only 43% supplied a prescription and instructions on how to administer intramuscular HC. Furthermore, while 71% provided a written emergency plan for steroid management during illness or stress, only 37% had an alert in the hospital system, and 31% recommended wearing a steroid-dependent alert bracelet/card.

Conclusions

To our knowledge, this is the first survey addressing AI management practices among physicians caring for individuals with DMD in Italy. Most physicians involved in DMD care manage fewer than 50 patients. There are notable differences in approach for minor, moderate, and major stress, with nearly a quarter of respondents not prescribing parenteral hydrocortisone in major stress

situations. Additionally, the majority of patients do not receive practical education or prescriptions for parenteral hydrocortisone. There is a clear need for enhanced education on AI risk in DMD, particularly regarding specific situations common in DMD patients (e.g., fractures, bisphosphonate infusion).

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P147

JOINT1286

Increased arterial stiffness and short QTc interval are associated to androgen levels in classical congenital adrenal hyperplasia due to 21 hydroxylase deficiency

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Context

Congenital Adrenal Hyperplasia (CAH) is a group of autosomal recessive disorders characterized by impaired cortisol synthesis and hyperandrogenism, current treatment of CAH mainly rely on glucocorticoids (GC) to suppress androgen hypersecretion and to mimic endogenous cortisol secretion. GC therapy, however, often needs to be administered at supra-physiological doses, with an increased risk of long-term complications.

Objective

To evaluate the cardiovascular and metabolic risk in a group of adult patients affected by CAH caused by 21 β -hydroxylase deficiency.

Subjects and methods

A cross-sectional study was conducted in a group of 32 adult patients affected from classical CAH due to 21 β -hydroxylase deficiency in treatment with different formulations of glucocorticoids (Hydrocortisone HC, Double-release Hydrocortisone DR-HC, Hydrocortisone and dexamethasone HC+DEX), compared with 73 unaffected controls. Anthropometric and metabolic biochemical parameters were collected for each of the subjects, as well as a 24-hour dynamic blood pressure monitoring (ABPM) and an EKG.

Results

The univariate analysis showed a higher weight ($P = 0.006$), systolic blood pressure ($P < 0.001$), glycemia ($P = 0.031$), triglycerides ($P = 0.025$), LDL cholesterol ($P < 0.001$) in the control group when compared to CAH patients; however, the latter being significantly younger than the control group ($P = 0.035$). The CAH group also exhibited a shorter QTc ($P = 0.006$), RR ($P = 0.045$) and QRS ($P = 0.004$) interval. The Ambulatory Arterial Stiffness Index (AASI), derived from the 24-hour ABPM, showed statistically significant higher values in the CAH group ($P = 0.006$), the two groups were matched 1:2 through a propensity score matched analysis, confirming a higher AASI score ($P < 0.001$) and a shorter QTc interval ($P = 0.004$). Through a multivariate analysis we found the AASI score to be related to CAH diagnosis (coeff. 1.131; $P < 0.001$), Age (coeff. 1.004; $P = 0.034$), BMI (coeff. 1.008; $P < 0.001$) and 17 OHP levels (coeff. 1.001 $P = 0.049$); while a shorter QTc interval seems to be related to CAH diagnosis (coeff. 0.977; $P = 0.039$) and ACTH levels (coeff. 0.999; $P = 0.021$). Patients treated with HC+DEX showed higher AASI ($P = 0.026$) and triglycerides levels ($P = 0.04$) when compared to patients treated with HC only or DR-HC, however no differences in hormonal levels and comorbidities were found between the groups.

Conclusion

The metabolic profile of CAH patients did not differ from unaffected controls, however androgens levels seem to be related to cardiovascular alterations in subjects affected by CAH, especially those in treatment with dexamethasone.

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P148

JOINT1348

Investigation of alternative hormones for evaluating selectivity of adrenal vein sampling in the subtype diagnosis of primary aldosteronism

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