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swiss hypertension news



## The word from Ticino

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In this newsletter of the SHG from Ticino, we will focus on some research activities performed in the Italian part of Switzerland that present interesting data, which are useful for the general practitioners. Moreover we show the correlation between arterial hypertension and obstructive

sleep apnea with pathophysiological data and proposal for therapeutic approach. Moreover, the importance of dairy product and swiss-italian alpine cheese for the cardiovascular health will be highlighted.

Enjoy the reading!

## The association between obstructive sleep apnea syndrome and arterial hypertension

Obstructive sleep apnea syndrome (OSAS) and arterial hypertension (HT) are two frequent diseases, both of which negatively impact the global cardiovascular risk.

In the last years, an epidemiological association between these two entities has been established, and OSAS has been identified among the most frequent factors of treatment resistance in HT.

Several mechanisms are involved in the link between OSAS to HT. In particular, OSAS stimulates the sympathetic nervous system during night-time with a residual effect over the day, and activates the renin-angiotensin-aldosterone system, responsible for water and salt retention. The latter could theoretically further promote OSAS since recent studies link OSAS to the nocturnal movement of fluids from the lower limbs to the peripharyngeal tissues, promoting the obstruction of the upper airways in the recumbent position.

Almost all the classes of anti-hypertensives have shown an effectiveness on the blood pressure (BP) profile of apneic patients. However, no recommendation on the best combination can be made, because of contradictory study results, partly biased by the

low statistical power of small cohorts or by too short follow-up. Furthermore, several anti-hypertensive drugs have undesirable effects affecting sleep quality (beta-blockers and calcium channel blockers), potentially promoting weight gain (beta-blockers) or pharyngeal inflammation (ACE-inhibitors). Nevertheless, some preliminary data suggest a possible beneficial impact of mineralocorticoid receptor blockers on OSAS.

The treatment of OSAS is warranted in the presence of resistant HT, with CPAP (Continuous Positive Airway Pressure) being the gold standard therapy. Several meta-analyses concordantly show a modest BP gain of about 2 mmHg under CPAP therapy. Most studies, however, suffer from methodological limitations, for example not considering therapeutic adherence to CPAP. Some variables - e.g. the presence of a daytime sleepiness and the severity of OSAS - seem to influence positively the impact of CPAP on BP, and studies considering these parameters showed a BP decrease of about 9 mmHg, which is comparable to the effect of a drug monotherapy. Another interesting aspect to consider is the synergistic effect of weight loss and CPAP therapy on BP decline.

PD. Dr.ssa Valentina Forni Ognà

### The SWICOS project

The increased life expectancy requires new strategies to reduce age-related complications, maintain quality of life and promote successful aging. The SWICOS study (BMJ Open 2016; 6: e013280) aims to investigate longitudinally health status and risk factors in two suburban villages (Cama and Lostallo) of an alpine valley of the Italian part of the canton Grisons (Switzerland) characterized by a poorly-migratory population.

Between 09/04/2015 and 31/12/2017, 415 subjects entered the study. Medical history, anthropometric data, cardiovascular risk factors, pulmonary function, physical fitness, nutritional status, mental and emotional status and laboratory data were assessed. The purpose of this preliminary report here is to describe

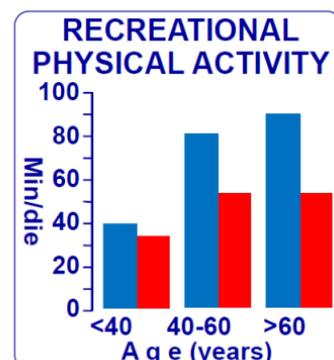
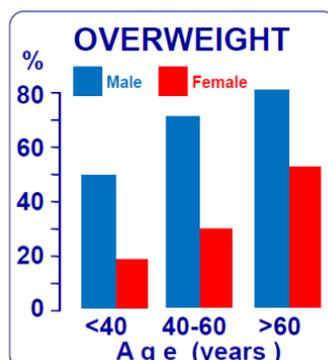
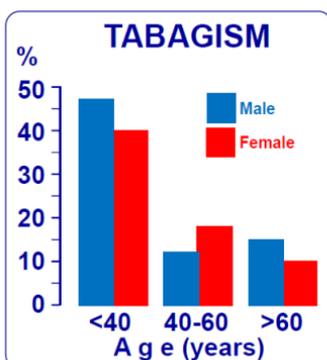
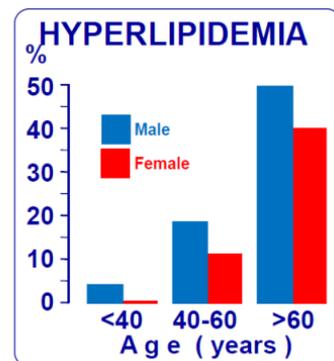
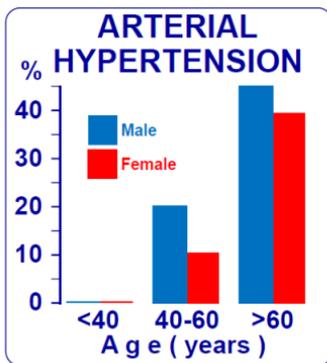
some cardiovascular risk factors in 344 subjects.

In conclusion these preliminary transversal results show that in these suburban villages:

- Smoking and inactive life style are more common among subjects  $\leq 40$  years old;
- High blood pressure and overweight are common in male subjects  $>40$  years old;
- The remaining cardiovascular risk factors increase with age.

Considering these data, efforts of general practitioners should be directed in preventive measures, especially in the young subjects

Dr. F. Muggli



## Cheese market in Bellinzona during autumn

### Dairy foods, health, hypertension and cardiovascular diseases

Every year in autumn a very nice and delicious market of dairy products, especially alpine cheese, take place in Bellinzona (picture). Evidence on consumption of dairy foods and human health is contradictory.

Convincing and probable evidence of decreased risk of colorectal cancer, hypertension, and cardiovascular disease, elevated blood pressure and fatal stroke, respectively, was found for total dairy consumption. Possible decreased risk of

breast cancer, metabolic syndrome, stroke and type-2 diabetes, and increased risk of prostate cancer and parkinson's disease was also found (Int J Food Sci Nutr. 2019 14:1-14).

In conclusion:

-Dairy products may be part of a healthy diet

-Although not scientifically proven, alpine cheese seems to have particular healthy characteristics, especially cheese from the Italian part of Switzerland!

Prof. G. Simonetti



#### Dates you should not forget

5ème congrès de printemps «Precision & uncertainty» | 27 - 29 mai 2020 | Congress Center Basel

Joint ESH-ISH meeting 2020  
May 29 – June 1, 2020  
Scottish Exhibition Campus  
Glasgow, United Kingdom

15e Journée Romande d'Hypertension,  
1 octobre 2020, Musée du Général Guisan, Pully

## Cardiovascular disease risk factors among male youths in Southern Switzerland

The distribution of cardiovascular disease risk factors among youths in Southern Switzerland is poorly understood. The aim of this analysis was therefore to describe the prevalence of cardiovascular disease risk factors in 18- to 20-year-old males undergoing medical examination to assess fitness for recruitment into the army.

Between 2009 and 2013, 1541 (21%) out of 7310 conscripts volunteered for answering a structured questionnaire addressing smoking behaviour, sedentariness and familial cardiovascular risk factors, as well as for measurement of blood pressure, lipidaemia and waist circumference.

Height, weight, body fatness and blood pressure were not statistically different between conscripts who had or had not volunteered to participate in the study. The following risk factors were detected: smoking (n = 656; 43% of the study participants), sedentariness (n = 594; 39%), positive cardiovascular family history (n = 235; 15%), blood pressure  $\geq 140/90$  mm Hg (n = 88; 5.7%), total cholesterol  $\geq 5.2$

mmol/l (n = 83; 5.4%), waist circumference  $\geq 1.02$  m (n = 55; 3.6%).

No cardiovascular risk factor was detected in 434 (28%), one factor in 612 (40%) and two or more factors in 495 (32%) participants.

This preliminary cross-sectional survey generated the first analysis of cardiovascular risk factors among ostensibly healthy male youths living in Southern Switzerland. The main finding is that two or more cardiovascular disease risk factors are present in approximately one third of them.

Since smoking and sedentary lifestyle, the most commonly detected cardiovascular risk factors, are preventable, youths represent an opportunity for the promotion of lifestyles that will affect the development and progression of atherosclerotic disease, as outlined also in the other presented study. (Swiss Med Wkly. 2016;146:w14338)

This analysis will be followed by a more comprehensive analysis, with measurement of surrogate markers of atherosclerosis (augmentation index, pulse wave velocity). The results of this new study will be presented in the next Ticino Newsletter of the SHG!

Last Minute: On the November the 16th, the Swiss Society of Hypertension (SSH) and the Dutch Society of Hypertension hosted the Hy7CC meeting in Amsterdam. The objective of the meeting is to support young investigators and create networking. This year, Leonie Kreysing (Zurich) and Erietta Polychronopoulou (Lausanne) were able to present their scientific work. We hope this will stimulate other fellows for the next meeting in Croatia.

