days was used to assess total protein intake and protein source. Adequacy of total protein intake (g/kg BW) was estimated by comparing with population reference intake of European Food Safety Authority (PRI EFSA).

Of all school-age children involved in this study, 65% of them had adequate BMI, 22% were overweight or obese and 13% were underweight according to sex-standardized WHO BMI-for-age z-scores. Almost all (99.4%) children exceeded the PRI EFSA recommendation for protein intake. Average daily total protein intake was 2.3 ± 0.1 g/kg BW (68.4 ± 1.4 g/day), which is about

$249 \pm 72\%$ of PRI EFSA recommendation. Children's daily animal protein intake (1.5 ± 0.04 g/kg BW) was twice as much as plant protein (0.8 ± 0.02 g/kg BW), which was evident from the animal-plant protein ratio (2.1 ± 0.1). In line with logistic regression, adjusted for energy intake and gender, BMI was negatively associated with total protein intake, as well as with animal protein intake. Accordingly, children who had higher total protein intake ($\beta = -5.087$, OR 0.006, 95% CI 0.001-0.04, $p < 0.001$) and animal protein ($\beta = -3.298$, OR 0.037, 95% CI 0.008-0.167, $p < 0.001$) were less likely to be overweight and obese. No association was observed between BMI and plant protein intake.

Intrinsically, results suggest that higher total and animal protein intake is associated with lower BMI in school-age children. However, additional studies with different designs would be required to determine the relationship between protein intake (total, animal and plant) and BMI or body composition in school-age children with respect to other lifestyle and environmental factors.

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DIAGNOSIS AND MANAGEMENT OF WILSON'S DISEASE IN CHILDREN: A TUNISIAN SINGLE-CENTER EXPERIENCE

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Goal Wilson's disease (WD) is an autosomal recessive genetic disease characterized by accumulation of copper in the body leading to severe hepatic and neurological damage. It is one of the few genetic diseases that can be treated effectively. The aim of the study was to describe Diagnostic features, therapeutic management and outcome of WD in Tunisian children.

Methods Retrospective cohort study of WD cases diagnosed at Tunisian tertiary referral hospital over a period of 10 years (2010 – 2019). Data collection was done from medical records.

Results We collected 20 cases of WD (15 boys and 5 girls). Median age at diagnosis was 8 years [3 -12 years]. Consanguinity was found in 14 patients.

Three patients had a history of WD in the siblings. Clinical presentation was as following: four patients were diagnosed by family screening at a presymptomatic stage, 15 patients presented with hepatic symptoms (jaundice (n=4); hepatomegaly (n=5); clinical signs of portal hypertension (n=6)) and one patient presented with hematuria caused by kidney stones (hypercalciuria). Chronic hepatitis, acute hepatitis, liver cirrhosis and fulminant liver failure were observed respectively in two, four, six and four cases. Neurological and psychiatric

involvement was noted at diagnosis in 7/20 patients. Kayser Fleischer's ring was observed in three cases.

Proximal tubular involvement was reported in three cases, associated to glomerular involvement in one case. Hematologic disorders were observed in

11/20 cases: pancytopenia (n=2), thrombocytopenia (n=5), Coombs-negative hemolytic anemia (n= 4). Thirteen patients had low levels of serum ceruloplasmin, with a median level of 0.12 g/L [0.04-0.18]. The 24-hours urinary copper test showed high level in 12 cases with a median level of 3.8 $\mu\text{mol}/24\text{h}$ [1.5-6.72]. D-penicillamine sensitization test was performed in ten cases and was positive in eight cases. Liver biopsy was done in only two cases. Mutation analysis of the ATP7B gene was performed in four cases: no mutation was detected in one case and three patients had homozygous ATP7B mutation (H1069Q). D-penicillamine and pyridoxine were started in all cases.

One patient presented adverse reaction and received zinc acetate (Wilzin).

Most patients were stabilized or improved on chelation therapy, one patient deteriorated and one patient died within the follow up period.

Conclusion Cirrhosis at diagnosis increases the risk of death. Early diagnosis, at a precirrhotic stage was associated with a best prognosis.

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ASSESSMENT OF NUTRITIONAL STATUS IN HOSPITALIZED CHILDREN IN TUNISIAN TERTIARY REFERRAL PEDIATRIC HOSPITAL

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Introduction Malnutrition of the hospitalized child is a widespread problem that remains under diagnosed because of the different definitions. The purpose of our work was to assess the nutritional status of the hospitalized children at Tunis Children's Hospital and to determine the factors determining nutritional status.

Methods This is a cross-sectional study in the 'one day' mode conducted three times. We included children aged between 3 months and 13 years and hospitalized for more than 48 hours. We evaluated the auxological parameters according to the curves of the Control Disease Center and the World Health Organization.

Results We enrolled 87 patients. The prevalence of undernutrition was 21% (18 children). Eight patients (9%) had chronic undernutrition. Twelve patients were under 24 months of age. Undernutrition was more common among children of rural origin and from poor socio-economic classes. Chronic underlying diseases were present in eleven of undernourished children. Food intake was 57% in average. Nutritional risk was high in 13 patients.

Acquired undernutrition was observed in 14 patients. Weight loss was more than 5% in nine of them. Underlying chronic disease, the nutritional risk score and the Waterlow index were significantly correlated with undernutrition.

The prevalence of overweight was 13% (11 patients). Mean age was 42 months.

Overweight was more common among girls, in rural areas, from poor families with a family history of obesity. The