Evaluating of knowledge of resident and internal doctors regarding serum pediatric protein profiles and the relevance of the prescriptions at Abderrahim Harouchi children's hospital in Casablanca

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\textbf{ABSTRACT}

\textbf{Introduction and purpose:} The serum protein profile remains a very useful test to diagnose, track, monitor and evaluate several inflammatory, nutritional and immune diseases. So, its prescription is still limited. The recommendations of good practices in biology Exigences. Depending on our situation, this examination is moderately prescribed by doctors. The objective of this study is to evaluate the prerequisites of internal doctors and residents in pediatric serum protein profile.

\textbf{Method:} a descriptive, quantitative and cross-sectional study. The questionnaire consisted of 20 questions, with 4 closed questions, 12 multiple choice questions and 4 closed-ended questions for 59 physicians. This questionnaire assesses the knowledge of resident and internal physicians and their need for training on the pediatric serum protein profile and their expectations for the services of the biochemistry laboratory.

\textbf{Results of the study:} The results led to a lack of training in pediatric serum protein profile. Only 3.7\% of internal doctors and pediatric residents who received training in this area. 63\% of doctors do not consider themselves competent to know the relevance of the prescription of the targeted protein profile. Only 9.3\% ensure that the satisfaction of the biochemistry laboratory's performance of the biological council is rather satisfied.

\textbf{Conclusion:} Pediatric serum protein profile training has been shown to be very fundamental for all prescribing pediatric doctors in order to reinforce the gains for a highly relevant prescription whose purpose is to accelerate and improve diagnosis.

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\section{Introduction:}
The serum protein profile is a very important examination for the diagnosis, monitoring, surveillance and evaluation of certain inflammatory, immune and nutritional diseases [1-2], but its prescription remains a little limited. According to the recommendations of the good practices in biology, the prescription of this examination must be carried out under precise conditions [3-4]. The teaching of the protein profile is based on the acquisition of the scientific basis of biochemistry in complementarity with medical science [5-6]. The learning method used is the spiral progression to facilitate learners’
assimilation of clinical and scientific skills [7], prompting the interest of the relevance of prescribing the protein profile to future prescribers [8]. In our context, this technique is poorly prescribed by internal and residents doctors [9]. The objective of this work is to assess the state of the art of internal and residents doctors regarding the serum protein profile.

2. Material and methods:
This is a descriptive, quantitative, exploratory and cross-sectional study supported by a 22 questions questionnaire, with closed questions in numbers of 4, 14 multiple-choice questions and 4 closed-ended questions from 59 physicians. This questionnaire evaluates their knowledge and their need for serum protein profile training as well as their expectation of benefits at the biochemistry laboratory. Data analysis was collected and processed using Sphinx plus2 software (V5).

3. Results and Discussion:
1.1. Training received on the pediatric protein profile:
96.3% of the participants didn’t receive a training in protein profile during the resident-internal.

![Figure 1: Formation received on the pediatric protein profile.](image1)

1.2. Evaluation of the relevance of prescription of pediatric protein profiles:
The study revealed theoretical knowledge with a rate of correct responses ranging from 37.0% to 83.3% concerning the interest of electrophoresis of serum proteins (ESP), the indication of the targeted protein profile (TPP) and immunofixation (IF).

![Figure 2: Evaluation of the relevance of prescription of pediatric protein profiles.](image2)
1.3. Satisfaction of the biochemistry laboratory relevance regarding the protein profile:
A little less than half of the respondents think that the response time is moderately satisfied, and almost the same for the quality of communication between biologists and prescribers with a rate of 44.44% concerning response time and 48.14% concerning communication between biologist and prescriber.

1.4. Discussion:
This study shows that 92.6% of participants didn’t receive training in protein profile. This may be justified by the study which showed that doctors didn’t receive extensive training on the interest of this examination [10].
We noticed a moderate level of knowledge concerning the interest of prescription protein profiles in pediatrics. precisely in targeted protein profile. So, the targeted protein profile is a very precise examination in the orientation and the follow-up of a pathology, since it informs us on a smaller number of the proteins but specific during inflammatory, immune, or nutritional syndrome [11].
Regarding the satisfaction of laboratory services all half of the respondents said that the response time and the quality of communication between biologists and prescribers are moderately satisfied.
In addition, the provision of biology counseling requires dialogue during all stages of the biological examination [5]. In this sense, the intranet system must be of great help between the clinician and the biologist.

4. Conclusion
Training in protein profile is considered necessary for the prescribing doctors in order to consolidate their knowledge for a more useful prescription for the purpose of an improved diagnosis. It’s therefore useful to sensitize the doctors on this point. Our immediate corrective action is to develop educational sheets and publish them to doctors regarding the interest and interpretation of serum protein electrophoresis.
References:


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