

This allows us to consider the dynamics of aconitate hydratase as a criterion for the action of free radicals.

An analysis of the results obtained indicates a significant decrease in the activity of aconitate hydratase in the blood serum of the examined individuals by an average of 2.4 times (Table 2).

table 2

Biochemical parameters of blood in patients with CKD

Index	Healthy individuals (control), n=14	Patients with CDLD, n=29
Aconite hydratase, U/ml	0.43±0.05	0.18±0.01*
Cystatin C, ng/ml	1037.1±14.2	1754.6±12.1
Protein C, mg/l	1.14±0.18	0.85±0.07*
Fibrinogen, g/l	3.14±0.41	3.01±0.43
Cathepsin B, μmol/min/g protein	28.7±2.04	43.8±3.19*

Note. * $p < 0.05$ compared to control.

As noted above, when Kupffer cells are stimulated, free radicals are formed, which also leads to the secretion of a low molecular weight protein, cystatin, which, being an endogenous inhibitor of cysteine proteases, regulates the activity of extracellular pool cathepsins.

The increase in the concentration of cystatin C in the blood serum of patients with chronic hepatitis noted by us is aimed at inhibiting the activity of cathepsin B or its binding. The increase in the concentration of cystatin C in the blood serum of the examined patients, which we found, indicates the possibility of using this indicator as one of the markers of macrophage stimulation in chronic liver damage.

Studies conducted in patients with chronic diffuse liver disease (CDLD) revealed a decrease in the activity of the protein C system in the blood plasma, which is apparently due to a violation of the protein-synthesizing function of the liver. In addition, a positive correlation was found between the content of protein C and fibrinogen in the blood plasma (Tables 1 and 2).

Thus, in patients with chronic diffuse liver disease against the background of the formation of reactive oxygen species and endogenous intoxication, hyperfermentemia is noted due to a violation of the membrane structures of hepatocyte mitochondria. There is also stimulation of liver macrophages, which is expressed in an increase in the concentration of cystatin C and cathepsin B in the blood. Against the background of a violation of the protein-synthesizing function of the liver, the concentration of protein C in the blood decreases. An increase in the activity of the lysosomal enzyme cathepsin B may be one of the reasons for the death of hepatocytes and the acceleration of apoptosis.

CONCLUSIONS

1. In patients with chronic liver disease, against the background of endogenous intoxication and an increase in lipid peroxidation products, cytolytic damage to hepatocytes and a state of hyperenzymemia are noted.

2. Cystatin C and cathepsin B are one of the markers of activation of the liver macrophage system.

3. The state of endotoxemia in patients with chronic liver disease is accompanied by impaired protein C synthesis.

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**“METALINGUISTIC AWARENESS: PHONOLOGICAL AWARENESS IN LANGUAGE
ACQUISITION”**

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Annotation. *This current study investigates phonological awareness in child language acquisition relying on recent researches and analyzing similarities and differences between ideas of a scholars. The article provides data on phonological development of children, and the ways how they are similar or different, relying on recent researches in a field.*

It refers to metalinguistic awareness that phonological abilities are required conscious awareness.

Keywords: *Metalinguistic, phonological awareness, **simplification in production, dyslexia***

Phonological awareness is a knowledge and skill of phonological structures, phonemes, sounds, meaningful segmentation of the word. Phonological awareness is a part of the whole phonological process utilized for making a word with sound segments

Many researchers agree that phonological awareness is an essential and initial part of metalinguistic awareness. Many linguists have come to their original ideas about phonological development and phonological awareness in child language acquisition based on previous research and their original experiment results. Phonological awareness has been proposed by many researchers, approaches, perspectives (Byrne and Feilding-Barnsley, 1991; Poskiparta, Niemi, and Vauras, 1999; Hugueta, Vila, and Liurda, 2000; Goetz, 2003; Yamashita, 2002; and Nathan, Stackhouse, Goulandris, and Snowling, Castles & Coltheart (2004) defined the term “phonological awareness” as explicit processing and functioning in speech. “Cross-Language Transfer of Phonological Awareness” by Aydin Durgunoglu emphasized the effect of word-identification in phonologic (oral) proficiency. Findings suggested that experience in L1 can assist children to begin literacy (Harold T. Edwards^{1,3} and Anita G). Kiparsky investigated “Metalinguistic Awareness in Children: A Developmental Progression”. In the article, they investigated whether developmental sequence exists in child metalinguistic awareness or make a judgment about meaningful utterance, semantic items by phonological knowledge. A similar theory was explained by Saywitz & Cherry-Wilkinson (1982) that children cannot distinguish language from knowledge of the language. Precisely, they will ultimately develop their judging ability to assign the meaning apart from the form. Elizabeth Sulzby Tucker introduced her authorship theory in phonological development of the learning process of a child in her book “Effects of Written Language and Metalinguistic Awareness on Language Acquisition from 5 to 12 years old”.

Phonology is the first step in language development. Yet, there are few pieces of research have been proposed on phonological awareness in child acquisition. However,

many linguistics agree that the age of 5 is considered as the most important period as there will be extremely subtle changes in language development, researchers have different approaches and ideas about this development process. Gibson & Levin remarked two main ideas in their research article "Review of the literature on phonology" that most children assume control of phonological output by the kindergarten age, moreover they control rules in the phonological system. Ingram (1974) shared a similar view as Gibson & Levin that child's phonological awareness is controlled as adults do while Charles Read (1975) argued that preschool children evolve different phonological systems than adults' by relying on consistent spelling and dictionaries. The effect of phonological awareness on children can be vividly seen in their written work of them. Another important idea that Gibson & Levin lodged is that as a child gets older, the process of phonological development becomes more difficult because of the tactic nature of phonology.

In her article "Theories of phonological development" Lise Menn pointed an identical view as Gibson & Levin by explaining how children make the sound as adults do. Of course, a child cannot immediately learn or properly pronounce the word and utterances because of the variation of lexical, social, morphological.

However, some of them reach a good result at the early month of their first year that they can produce longer word babble and reach to the recognizable lexical item as well. According to Barwa. Raif phonological awareness is a part of the whole procedure in acquisition. that comprises four main steps: babbling, **developmental order, simplification in production**. He explained that at the beginning of phonological acquisition children have to distinguish meaningful segments of the sentence and speech segmentation is a dilemma for children at an early age. There are two reasons why children's phonological awareness is delayed. First, it is challenging to distinguish distinct units in the sentence, for example, there is space given to separate every single word in the written language but this does not occur in oral language. For instance, "This is a book", is a simple sentence but children who are at the age of kindergarten do not have reading literacy yet. And they listen to it as one word "Thisisabook". Second, assigning a meaning to the word and differing the sequence of "book" from "took" as two distinct words.

Unlikely previous researches Line Men stated that procedure of the phonology begins in the womb and develops until the teenage years.

The main idea in his article is that children use more consonant sounds in the first or second syllables however they have difficulty voicing them at the ending of the word (last syllable)

(Joan & Velten 1943). Only voiced nasals like -m and -n are convenient and easier to use in the final position. A similar perspective was discussed by Leapold (2004) that in most cases children tend to omit the last consonant or last syllable in the word if there is no stress. For instance, words like "boot" [bu], ball [ba] are frequently omitted by children by the age of three. Three old children become more accurate to pronounce the words with only 10% of omitting the final syllable. (Winitz & Irwin 1958). According to Smith (1973),

there is more tendency to omit initial sound in the word in children's early speech. He explained that adjacent consonants are hard to pronounce and typically manage a certain part of the word. For instance, words which begins with -st, -sm, -cl, -br sounds usually disappear in child speech as street [reet], smell [mell], close[lose], break[reak].

Development of phonological awareness in children

There is an argumentative theory about the poor performance of phoneme segmentation in child language acquisition. Bruce (1964) was a pioneer researcher to investigate the developmental progression of phonological awareness. He examined pre-school students with phoneme deletion activity in five and nine years old children. He asked students to delete initial, medial, and final sounds (phonemes) and pronounce the results. The results surprised him that children showed poor performance for the task. Five years old children were almost unable to manage the task, very few especially 6 years old ones produced the true answers. Bruce's theory showed the awareness of phonemes in the word is not a skill, but an experience. The perspective was corroborated by further research of Liberman. He with his colleagues (Shankweiler, Fischer, & Carter, 1974) examined children who were four up to seven years old on how they distinguish syllables from phoneme segmentation. In the experiment, children were expected to tap out the number of syllable or phonemic segments in the word. Identifying phonemes was difficult for children rather than tapping out the number of syllables. Of course, there were improvements, however, almost all pre-school and kindergarten children could not manage to determine how many meaningful segments in the word. This study indicated that pre-school children do not have enough awareness of individual phonemes, but showed syllable acquisition as Bruce explained. Yet, linguists were not sure whether phonological awareness is the result of the development of general knowledge or other factors. Morais, Cary, Algeria, and Bertelson (1979) did a similar experiment among adults and the study showed that almost half of the participants were unable to produce correct answers. The result showed that development of the phonological awareness enables the student to literacy development and phonemic segments improved by reading ability when learners learn to read. Zhang, Nie, & Ding (1986) examined adults in language tasks relying on alphabetical knowledge to read the text. Very similar findings resulted that students demonstrated quite good proficiency in alphabetic reading rather than logographic.

On the one hand, these researchers say that phonological development occurs as a result of reading literacy in alphabetic orthography. On the other hand, other studies suggest that phonological awareness itself enhances reading ability. Elkonin (1973) advocated the approach that pre-school children were unable to determine to single phonemes that make up words and believed that phonological awareness is important for learning letters, he suggested this process would be easier if children will be taught on sounds before reading. One of the controversial and debatable arguments among linguists