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ЕЖЕМЕСЯЧНЫЙ НАУЧНЫЙ ЖУРНАЛ

Медицинские новости Грузии

საქართველოს სამედიცინო სიახლენი

GEORGIAN MEDICAL NEWS

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GMN: Georgian Medical News is peer-reviewed, published monthly journal committed to promoting the science and art of medicine and the betterment of public health, published by the GMN Editorial Board since 1994. GMN carries original scientific articles on medicine, biology and pharmacy, which are of experimental, theoretical and practical character; publishes original research, reviews, commentaries, editorials, essays, medical news, and correspondence in English and Russian.

GMN is indexed in MEDLINE, SCOPUS, PubMed and VINITI Russian Academy of Sciences. The full text content is available through EBSCO databases.

GMN: Медицинские новости Грузии - ежемесячный рецензируемый научный журнал, издаётся Редакционной коллегией с 1994 года на русском и английском языках в целях поддержки медицинской науки и улучшения здравоохранения. В журнале публикуются оригинальные научные статьи в области медицины, биологии и фармации, статьи обзорного характера, научные сообщения, новости медицины и здравоохранения. Журнал индексируется в MEDLINE, отражён в базе данных SCOPUS, PubMed и ВИНИТИ РАН. Полнотекстовые статьи журнала доступны через БД EBSCO.

GMN: Georgian Medical News – საქართველოს სამედიცინო სიახლენი – არის ყოველთვიური სამეცნიერო სამედიცინო რეცენზირებადი ჟურნალი, გამოიცემა 1994 წლიდან, წარმოადგენს სარედაქციო კოლეგიისა და აშშ-ის მეცნიერების, განათლების, ინდუსტრიის, ხელოვნებისა და ბუნებისმეტყველების საერთაშორისო აკადემიის ერთობლივ გამოცემას. GMN-ში რუსულ და ინგლისურ ენებზე ქვეყნდება ექსპერიმენტული, თეორიული და პრაქტიკული ხასიათის ორიგინალური სამეცნიერო სტატიები მედიცინის, ბიოლოგიისა და ფარმაციის სფეროში, მიმოხილვითი ხასიათის სტატიები.

ჟურნალი ინდექსირებულია MEDLINE-ის საერთაშორისო სისტემაში, ასახულია SCOPUS-ის, PubMed-ის და ВИНИТИ РАН-ის მონაცემთა ბაზებში. სტატიების სრული ტექსტი ხელმისაწვდომია EBSCO-ს მონაცემთა ბაზებიდან.

WEBSITE

www.geomednews.com

К СВЕДЕНИЮ АВТОРОВ!

При направлении статьи в редакцию необходимо соблюдать следующие правила:

1. Статья должна быть представлена в двух экземплярах, на русском или английском языках, напечатанная через **полтора интервала на одной стороне стандартного листа с шириной левого поля в три сантиметра**. Используемый компьютерный шрифт для текста на русском и английском языках - **Times New Roman** (**Кириллица**), для текста на грузинском языке следует использовать **AcadNusx.** Размер шрифта - **12**. К рукописи, напечатанной на компьютере, должен быть приложен CD со статьей.

2. Размер статьи должен быть не менее десяти и не более двадцати страниц машинописи, включая указатель литературы и резюме на английском, русском и грузинском языках.

3. В статье должны быть освещены актуальность данного материала, методы и результаты исследования и их обсуждение.

При представлении в печать научных экспериментальных работ авторы должны указывать вид и количество экспериментальных животных, применявшиеся методы обезболивания и усыпления (в ходе острых опытов).

4. К статье должны быть приложены краткое (на полстраницы) резюме на английском, русском и грузинском языках (включающее следующие разделы: цель исследования, материал и методы, результаты и заключение) и список ключевых слов (key words).

5. Таблицы необходимо представлять в печатной форме. Фотокопии не принимаются. **Все цифровые, итоговые и процентные данные в таблицах должны соответствовать таковым в тексте статьи**. Таблицы и графики должны быть озаглавлены.

6. Фотографии должны быть контрастными, фотокопии с рентгенограмм - в позитивном изображении. Рисунки, чертежи и диаграммы следует озаглавить, пронумеровать и вставить в соответствующее место текста **в tiff формате**.

В подписях к микрофотографиям следует указывать степень увеличения через окуляр или объектив и метод окраски или импрегнации срезов.

7. Фамилии отечественных авторов приводятся в оригинальной транскрипции.

8. При оформлении и направлении статей в журнал МНГ просим авторов соблюдать правила, изложенные в «Единых требованиях к рукописям, представляемым в биомедицинские журналы», принятых Международным комитетом редакторов медицинских журналов - http://www.spinesurgery.ru/files/publish.pdf и http://www.nlm.nih.gov/bsd/uniform_requirements.html
В конце каждой оригинальной статьи приводится библиографический список. В список литературы включаются все материалы, на которые имеются ссылки в тексте. Список составляется в алфавитном порядке и нумеруется. Литературный источник приводится на языке оригинала. В списке литературы сначала приводятся работы, написанные знаками грузинского алфавита, затем кириллицей и латиницей. Ссылки на цитируемые работы в тексте статьи даются в квадратных скобках в виде номера, соответствующего номеру данной работы в списке литературы. Большинство цитированных источников должны быть за последние 5-7 лет.

9. Для получения права на публикацию статья должна иметь от руководителя работы или учреждения визу и сопроводительное отношение, написанные или напечатанные на бланке и заверенные подписью и печатью.

10. В конце статьи должны быть подписи всех авторов, полностью приведены их фамилии, имена и отчества, указаны служебный и домашний номера телефонов и адреса или иные координаты. Количество авторов (соавторов) не должно превышать пяти человек.

11. Редакция оставляет за собой право сокращать и исправлять статьи. Корректура авторам не высылается, вся работа и сверка проводится по авторскому оригиналу.

12. Недопустимо направление в редакцию работ, представленных к печати в иных издательствах или опубликованных в других изданиях.

При нарушении указанных правил статьи не рассматриваются.

REQUIREMENTS

Please note, materials submitted to the Editorial Office Staff are supposed to meet the following requirements:

1. Articles must be provided with a double copy, in English or Russian languages and typed or compu-ter-printed on a single side of standard typing paper, with the left margin of **3** centimeters width, and **1.5** spacing between the lines, typeface - **Times New Roman** (**Cyrillic**), print size - **12** (referring to Georgian and Russian materials). With computer-printed texts please enclose a CD carrying the same file titled with Latin symbols.

2. Size of the article, including index and resume in English, Russian and Georgian languages must be at least 10 pages and not exceed the limit of 20 pages of typed or computer-printed text.

3. Submitted material must include a coverage of a topical subject, research methods, results, and review.

Authors of the scientific-research works must indicate the number of experimental biological species drawn in, list the employed methods of anesthetization and soporific means used during acute tests.

4. Articles must have a short (half page) abstract in English, Russian and Georgian (including the following sections: aim of study, material and methods, results and conclusions) and a list of key words.

5. Tables must be presented in an original typed or computer-printed form, instead of a photocopied version. **Numbers, totals, percentile data on the tables must coincide with those in the texts of the articles.** Tables and graphs must be headed.

6. Photographs are required to be contrasted and must be submitted with doubles. Please number each photograph with a pencil on its back, indicate author's name, title of the article (short version), and mark out its top and bottom parts. Drawings must be accurate, drafts and diagrams drawn in Indian ink (or black ink). Photocopies of the X-ray photographs must be presented in a positive image in **tiff format**.

Accurately numbered subtitles for each illustration must be listed on a separate sheet of paper. In the subtitles for the microphotographs please indicate the ocular and objective lens magnification power, method of coloring or impregnation of the microscopic sections (preparations).

7. Please indicate last names, first and middle initials of the native authors, present names and initials of the foreign authors in the transcription of the original language, enclose in parenthesis corresponding number under which the author is listed in the reference materials.

8. Please follow guidance offered to authors by The International Committee of Medical Journal Editors guidance in its Uniform Requirements for Manuscripts Submitted to Biomedical Journals publication available online at: http://www.nlm.nih.gov/bsd/uniform_requirements.html
http://www.icmje.org/urm_full.pdf
In GMN style for each work cited in the text, a bibliographic reference is given, and this is located at the end of the article under the title "References". All references cited in the text must be listed. The list of references should be arranged alphabetically and then numbered. References are numbered in the text [numbers in square brackets] and in the reference list and numbers are repeated throughout the text as needed. The bibliographic description is given in the language of publication (citations in Georgian script are followed by Cyrillic and Latin).

9. To obtain the rights of publication articles must be accompanied by a visa from the project instructor or the establishment, where the work has been performed, and a reference letter, both written or typed on a special signed form, certified by a stamp or a seal.

10. Articles must be signed by all of the authors at the end, and they must be provided with a list of full names, office and home phone numbers and addresses or other non-office locations where the authors could be reached. The number of the authors (co-authors) must not exceed the limit of 5 people.

11. Editorial Staff reserves the rights to cut down in size and correct the articles. Proof-sheets are not sent out to the authors. The entire editorial and collation work is performed according to the author's original text.

12. Sending in the works that have already been assigned to the press by other Editorial Staffs or have been printed by other publishers is not permissible.

Articles that Fail to Meet the Aforementioned Requirements are not Assigned to be Reviewed.

ავტორთა საყურადღებოდ!

რედაქციაში სტატიის წარმოდგენისას საჭიროა დავიცვათ შემდეგი წესები:

1. სტატია უნდა წარმოადგინოთ 2 ცალად, რუსულ ან ინგლისურ ენებზე,დაბეჭდილი სტანდარტული ფურცლის 1 გვერდზე, 3 სმ სიგანის მარცხენა ველისა და სტრიქონებს შორის 1,5 ინტერვალის დაცვით. გამოყენებული კომპიუტერული შრიფტი რუსულ და ინგლისურენოვან ტექსტებში - **Times New Roman (Кириллица)**, ხოლო ქართულენოვან ტექსტში საჭიროა გამოვიყენოთ **AcadNusx.** შრიფტის ზომა – 12. სტატიას თან უნდა ახლდეს CD სტატიით.

2. სტატიის მოცულობა არ უნდა შეადგენდეს 10 გვერდზე ნაკლებს და 20 გვერდზე მეტს ლიტერატურის სიის და რეზიუმეების (ინგლისურ, რუსულ და ქართულ ენებზე) ჩათვლით.

3. სტატიაში საჭიროა გაშუქდეს: საკითხის აქტუალობა; კვლევის მიზანი; საკვლევი მასალა და გამოყენებული მეთოდები; მიღებული შედეგები და მათი განსჯა. ექსპერიმენტული ხასიათის სტატიების წარმოდგენისას ავტორებმა უნდა მიუთითონ საექსპერიმენტო ცხოველების სახეობა და რაოდენობა; გაუტკივარებისა და დაძინების მეთოდები (მწვავე ცდების პირობებში).

4. სტატიას თან უნდა ახლდეს რეზიუმე ინგლისურ, რუსულ და ქართულ ენებზე არანაკლებ ნახევარი გვერდის მოცულობისა (სათაურის, ავტორების, დაწესებულების მითითებით და უნდა შეიცავდეს შემდეგ განყოფილებებს: მიზანი, მასალა და მეთოდები, შედეგები და დასკვნები; ტექსტუალური ნაწილი არ უნდა იყოს 15 სტრიქონზე ნაკლები) და საკვანძო სიტყვების ჩამონათვალი (key words).

5. ცხრილები საჭიროა წარმოადგინოთ ნაბეჭდი სახით. ყველა ციფრული, შემაჯამებელი და პროცენტული მონაცემები უნდა შეესაბამებოდეს ტექსტში მოყვანილს.

6. ფოტოსურათები უნდა იყოს კონტრასტული; სურათები, ნახაზები, დიაგრამები - დასათაურებული, დანომრილი და სათანადო ადგილას ჩასმული. რენტგენოგრამების ფოტოასლები წარმოადგინეთ პოზიტიური გამოსახულებით **tiff** ფორმატში. მიკროფოტოსურათების წარწერებში საჭიროა მიუთითოთ ოკულარის ან ობიექტივის საშუალებით გადიდების ხარისხი, ანათალების შეღებვის ან იმპრეგნაციის მეთოდი და აღნიშნოთ სურათის ზედა და ქვედა ნაწილები.

7. სამამულო ავტორების გვარები სტატიაში აღინიშნება ინიციალების თანდართვით, უცხოურისა – უცხოური ტრანსკრიპციით.

8. სტატიას თან უნდა ახლდეს ავტორის მიერ გამოყენებული სამამულო და უცხოური შრომების ბიბლიოგრაფიული სია (ბოლო 5-8 წლის სიღრმით). ანბანური წყობით წარმოდგენილ ბიბლიოგრაფიულ სიაში მიუთითეთ ჯერ სამამულო, შემდეგ უცხოელი ავტორები (გვარი, ინიციალები, სტატიის სათაური, ჟურნალის დასახელება, გამოცემის ადგილი, წელი, ჟურნალის №, პირველი და ბოლო გვერდები). მონოგრაფიის შემთხვევაში მიუთითეთ გამოცემის წელი, ადგილი და გვერდების საერთო რაოდენობა. ტექსტში კვადრატულ ფჩხილებში უნდა მიუთითოთ ავტორის შესაბამისი N ლიტერატურის სიის მიხედვით. მიზანშეწონილია, რომ ციტირებული წყაროების უმეტესი ნაწილი იყოს 5-6 წლის სიღრმის.

9. სტატიას თან უნდა ახლდეს: ა) დაწესებულების ან სამეცნიერო ხელმძღვანელის წარდგინება, დამოწმებული ხელმოწერითა და ბეჭდით; ბ) დარგის სპეციალისტის დამოწმებული რეცენზია, რომელშიც მითითებული იქნება საკითხის აქტუალობა, მასალის საკმაობა, მეთოდის სანდოობა, შედეგების სამეცნიერო-პრაქტიკული მნიშვნელობა.

10. სტატიის ბოლოს საჭიროა ყველა ავტორის ხელმოწერა, რომელთა რაოდენობა არ უნდა აღემატებოდეს 5-ს.

11. რედაქცია იტოვებს უფლებას შეასწოროს სტატია. ტექსტზე მუშაობა და შეჯერება ხდება საავტორო ორიგინალის მიხედვით.

12. დაუშვებელია რედაქციაში ისეთი სტატიის წარდგენა, რომელიც დასაბეჭდად წარდგენილი იყო სხვა რედაქციაში ან გამოქვეყნებული იყო სხვა გამოცემებში.

აღნიშნული წესების დარღვევის შემთხვევაში სტატიები არ განიხილება.

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CHLOROQUINE INDUCED LESIONS IN LIVER OF ALBINO MICE

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Abstract.

A study was carried out to demonstrate the effects of chloroquine on liver of developing albino rats. In this study, 20 white albino mice were used, and distributed in 2 groups. They were kept in the animal house of the College of Veterinary Medicine, their ages ranged between (4-3) months and they were in good health. The first group (G1) was considered a control group, this group included 10 mice who were given regular food in addition to sterilized water daily for a period of (30) days, the second group (G2) included 10 mice, they were given food and water with chloroquine after mixing it in 1ml of distilled water at a dose of 1.2 mg/kg/day for each animal orally for a period of 30 days, it was found that chloroquine induced toxicity in liver tissue of albino mice which were exposed to chloroquine drug for longer during their life. Histological sections of stomach revealed that degenerative cases were present in the mucosa of it and the gastric glands also demonstrated sloughing of its mucus cells, and histological sections of small intestine indicated that the degenerative changes were present in the mucosa and submucosa reflected by sloughing of certain villi and the intestinal glands were also affected, lymphocytic infiltration was present in between the intestinal glands with plasma cells. The present study indicated that the liver tissue was affected by drug used via effect on the histological structure, as there was hypertrophy and degeneration of liver cells, hypertrophy of Kupffer cells in the blood sinusoids.

Key words. Chloroquine, albino mice, visceral tissues.

Introduction.

Since ancient times, humans have used drugs to treat many mental and organic diseases, and there is no doubt that scientific development has led to the invention of devices and the manufacture of many types of drugs and medicines from plant sources or chemicals [1], and medicines made from chemicals have a vital impact on Human or animal, and they are used to treat, heal, and diagnose diseases, or they are used for specific periods or continuously in the case of chronic diseases, as medicines can affect physiological processes in natural and pathological cases, as medicines are divided depending on their mechanism of action and effect, some of the medicines work It inhibits the building of the cell wall of bacteria, some of which work by inhibiting the synthesis of proteins, and some of them work by inhibiting the construction of deoxygenated DNA [2]. Global consumption of antibiotics increased significantly between 2000 and 2001, so the World Health Organization developed a plan on antimicrobial resistance in 2015 and the optimal use of antibiotics [3,4], as the frequent and incorrect use of antibiotics leads to increased exposure of the body to colonization of pathogenic organisms [5].

Latest research confirmed a potential beneficial role of chloroquine in the treatment COVID-19 caused by coronavirus [6]. The ability of chloroquine to bind with glycosylation at the cellular receptors of the virus and also alter the internal pH required for viral cell breakdown [7], therefore, choloroquine finds application in the treatment of severe acute respiratory syndrome (SARS-COV-2) caused by the coronavirus [6]. Chloroquine is safe to use for women during pregnancy, therefore, the Centers for Disease Control and Prevention prefers in the United States, recommended chloroquine for the treatment of malaria in pregnancy [8], and there is not enough evidence to determine if chloroquine is safe to give to people 65 years of age or older [9].

Chloroquine is an inexpensive drug that belongs to the World Health Organization list [10], and regardless of its effectiveness in combating malaria, it has an antiviral effect [11]. Chloroquine was used for the first time in the early twentieth century in the treatment of malaria, and it was developed as it was successfully used to treat extra-intestinal dysentery, and many infectious diseases [12], chloroquine is taken orally [13], or as reduced doses injection over (1-6 weeks) for severe cases [14], toxicity reported at doses higher than 20 mg/kg [15].

The side effects of chloroquine are tolerable blurred vision, GIT upset, swelling of the legs/ankles, shortness of breath, pale nails and skin, muscle weakness, facilitating bruising and bleeding, hearing and mental problems [16]. Chloroquine is rapidly and completely absorbed from the gastrointestinal tract, and chloroquine is deposited in tissues, including the liver [17]. Because of the frequent use of chloroquine at the present time, this study was conducted, which aimed to: Assessment of the effect of using chloroquine on the histological structure of the small intestine, stomach, and liver.

Materials and Methods.

The current study was conducted in the animal facilities of the College of Veterinary Medicine in Tikrit University from (6/1/2022) to (6/2/2022), according to the following steps:

Preparation of animals: In this study, 20 healthy white laboratory mice were used (weight 30-40gm; ages 3.5-4.5 months). The animals were obtained from the animal house of the College of Veterinary Medicine, they were placed in plastic cages with dimensions 45 x 30 x 15 cm designed specifically for breeding mice, and spread with sawdust, taking care to clean the cages and sterilize them constantly. The animals were kept under standard conditions regarding ventilation, temperature, light/darkness cycle, and standard food.

Pharmaceutical property used in the study: Chloroquine is in the form of a powder of (100%) purity, which is produced by the State Company for the Pharmaceutical Industry and Medical Appliances in Samarra.

Experimental design: The mice used in the study were randomly distributed to a group of chloroquine in addition to a control group:

The first group (G1) which were considered a control group: this group included (10) mice who were given regular food in addition to sterilized water daily for a period of (30) days.

The second group (G2): This group included (10) mice, they were given food and water daily with chloroquine after dissolving it in 1 ml of distilled water at a concentration of 1.2 mg/kg for each animal orally for a period of 30 days.

Scarifying and dissection animals: After the end of the experiment, the animal is killed by separating the cervical vertebrae and fixing the mice on the dorsal side above the autopsy plate, and their front and hind limbs will fix with pins. The animals will dissect from the beginning of the abdominal cavity with sharp scissors. The small intestine, liver, and stomach organs will remove, and these tissues were washed with physiological solution normal saline.

Histological sections preparation: All animals were given intensive dose of chloroform anesthesia, the tissues were processed starting with fixation by formalin solution, dehydration, clearing, infiltration and embedding, tissue sectioning, tissue attachment, de-wax and hydration, staining Harris hematoxyline and eosin dyes were used. Mounting, this was made using D.P.X, cover slips were used to cover the sections. A light Microscope (Motic microscope, /china) was used to perform the microscopically investigations of this study.

Results.

The liver lobule has central vein, surrounded by columns of liver cells, each cell was polyhedral in shape and have spherical nucleus, those cells are surrounded by blood sinusoids which have kupffer cells (Figure 1).

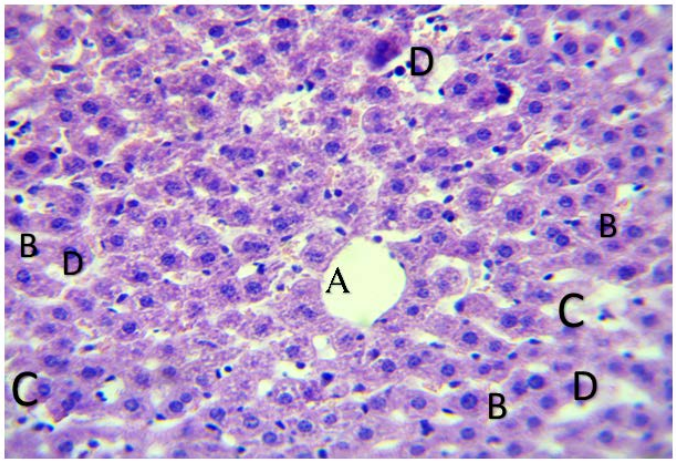

Figure 1. *Liver lobule, central vein (A), liver cells with polyhedral shape (B), kupffer cells (C), in blood sinusoid (D) (H&E X40).*

The portal area in the liver tissue has portal vein, bile ductule and branch of hepatic artery, the area was infiltrated with WBCs and surrounded from outside by columns of liver cells and surrounded by blood sinusoids with kupffer cells (Figure 2).

The central vein was filled with hemolyzed blood, surrounded by infiltration of lymphocytes around the wall of vein. The liver cells were present in groups, each cell was polygonal in shape, the blood sinusoids were wide network channels with kupffer cells present in great number (Figure 3).

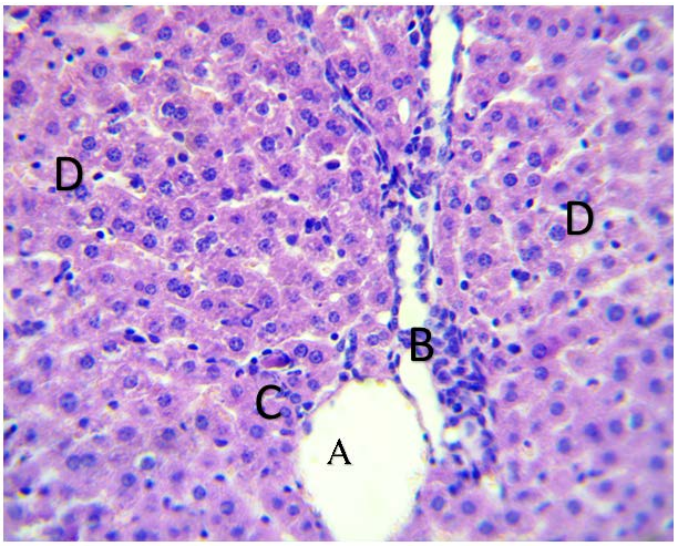

Figure 2. *Portal area, portal vein (A), bile ductal (B), WBCs around the portal vein (C), blood sinusoids with kupffer cells (D) (H&E X40).*

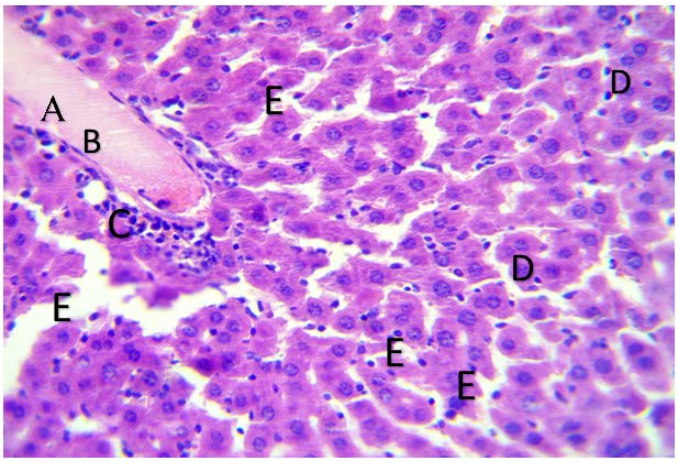

Figure 3. *Central vein of liver lobule (A), filled with hemolyzed blood (B) WBCs infiltration (C) liver cells (D) kupffer cells (E) in blood sinusoids (H&E X40).*

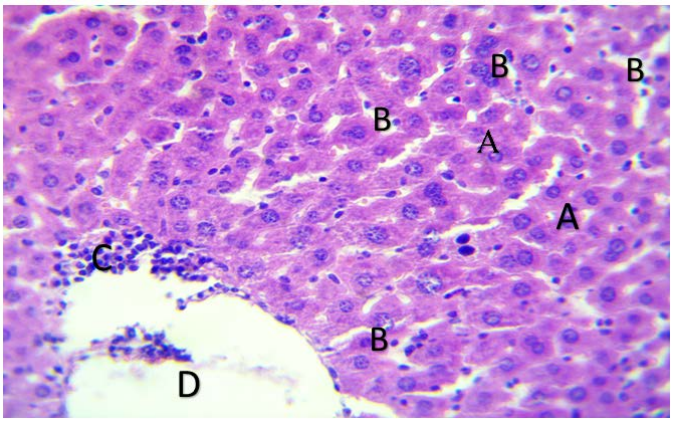

Figure 4. *Liver lobule, columns of polyhedral liver cells (A), kupffer cells (B) in the blood sinusoids, nodular aggregation of lymphocytes (C) central vein (D) (H&E X40).*

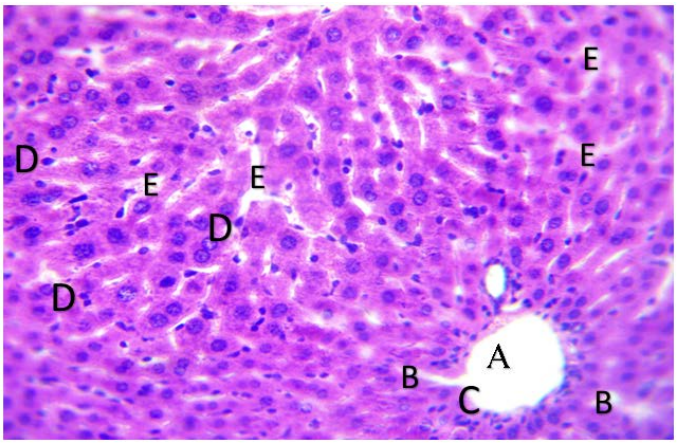

Figure 5. *Central vein (A), blood sinusoids drain on central vein (B), lymphocytes (C) kupffer cells (D) in blood sinusoids (E) (H&E X40).*

The liver cells are present in columns and others in groups with spherical nucleus in each one, surrounded by kupffer cells in blood sinusoids, certain kupffer cells were hypertrophied, the central vein was wide and its basement membrane with endothelial cells on it was lost, nodular aggregation of lymphocytes around the central vein was seen (Figure 4).

The central vein was wide and continuous with blood sinusoids at its periphery, surrounded with lymphocytes, most of kupffer cells were hypertrophied inside the blood sinusoids, the hepatic cells were arranged in columns (Radial pattern) toward the central vein (Figure 5).

Discussion.

The liver is a vital organ because it has enzymatic pathways involved in its physiological functions. Its major functions include carbohydrate, protein, and fat metabolism, immunity, exogenous (drug) and endogenous (substance). Therefore, many drugs and toxic substances can change the course of these processes [22], and the liver metabolic role of chemicals can incite the occurrence of oxidative liver mutilation and the mitochondrial vitiation, and thus these drugs cause damage to the liver, and that these damages may result in direct cytotoxicity or through self-sensitization to this substance [23].

The metabolic activity of the liver increases when exposed to toxic substances during the process of detoxification to balance the stress caused by toxins. This increase in order to release energy sources such as glucose is usually accompanied by cell death and decomposition and necrosis may occur after severe degeneration or occur directly. Small parts are eliminated by phagocytes The remainder becomes fluid and enters the lymph and veins. [24].

The findings of the present study paraded the manifestation of cellular tissue damages in the liver of mice that were exposed to the drug. These damages were denoted in the occurrence of hypertrophy in the size of a number of hepatocytes and their nuclei thickening with the occurrence of ruptures in the cytoplasm of other liver cells and the lysis of the nuclei of a number of cells and necrosis of other cells, and this is in line with what the researcher Akin et al 2021 [25] found it, when animals were dosed with chloroquine at a concentration of (50 mg/kg) for 50 days, as it found necrosis, degeneration, and death of hepatocytes.

The hepatocyte degeneration and focal infiltration of lymphocytes in this study are in agreement with the study of the researcher Sarhat et al 2019 [26] when the animals were administered chloroquine at a concentration (20 mg/kg) for 48 hours and matched with the outcomes of the Elshishtawy et al 2014 [27] when the animals were administered with a dose Chloroquine (250 mg/kg) for 6 weeks.

Inflammation of liver with cellular deterioration may result from a disturbance in the metabolic processes of hepatocytes depending on the concentration of the dose in the bloodstream gastrointestinal tract [28]. This makes them constantly vulnerable to damage, the severity of which appears in cells when there is a disturbance in the nutrition of cells and the concentration of the toxin over the length of time that the organ is exposed to, or the cause of cell enlargement may be due to the effect of the drug on cellular membranes and on the ionic balance.

The results showed the presence of inflammatory cells in abundance forming a large aggregation, and Kupffer cells in abundance, as well as the occurrence of bleeding and congestion. The presence of filter cells can be explained by the presence of degenerative changes in the liver tissue that secreted chemical attractions and then the infiltration of the area with inflammatory cells such as neutrophils and monocytes to defend the body [29], inflammation is part of a complex biological response in which the body attempts to eliminate pathogens and other agents to begin the healing process [30], when an invader or toxic materials enter the body, the inflammatory process commence with the first step, which is the recognition of the toxic substance, and then the dilates blood vessels, and fluid and inflammatory cells filter from them to the nearby tissues, as they are enticed to the battle zone to treat the inflammation [31-33], and Kumar et al 2007 [34] also implied that the cause of red blood cells burst are reconciled by macrophages due to local hemorrhage, and the increase in the number of Kupffer cells is only a result of hepatitis [35].

The mechanism of the toxic effects of chloroquine is obscure, but a number of reports have indicated that it may be owed to the assembly of a number of redox byproducts, which increase the assembly of redox metabolites and that chloroquine induces in particular in the Kupffer cells in the liver, ensuing in ravage to the body overloading lysosomes in the liver with indigestible substances and increasing their size and number [36], researcher Xu et al 2018 [37-40] indicated that anti-malarial tackle cellular phagocytosis of the liver, which leads to hepatocyte degeneration. In alternative study, it was spotted that chloroquine lofty lipid peroxidation perhaps as a consequence of boosted generation of free radicals or the incompetence of chloroquine to silence the release of oxidant biomolecules. This eminent rate of lipid oxidation is in prove of past outcomes by Ajeigbe et al 2012 [41]. Free radicals have been confirmed to wield adverse effect on stomach [39,40].

In the present study, it was discerned that chloroquine-exposed group had eminent gastric ulcer score entailing adjournment in the wound resolution, perhaps due to the fact that chloroquine decelerated particular steps of gastric ulcer reconciling or wield inhibitory indicators on particular reconciling gastric ulcer healing cells. Also, colonal mucosa injury was indicated

by administration of anti-malarial drug (chloroquine) for male albino Rats at 8mg/kg by [21], infiltration of inflammatory cells with ulceration of colonic mucosal epithelial cells and this result is not a way from data recorded in the present study for intestinal mucosa, so the use of chloroquine as malaria treatment in colitis patients may not be advisable [42].

Conclusion.

Dosing with chloroquine, even if it is a therapeutic dose, has an effect on the histological structure, as there was degeneration, inflammation, infiltration of blood cells with congestion of blood vessels and hemolysis in a number of cavities of blood vessels. Increase in the number of lymphocytes aggregation was indicated in the studied organs by microscopic examining.

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