The protective role of parsley oil on kidney of the albino rat offsprings against toxity of Etoricoxib drug (Arcoxia)

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Abstract: This research examines the effect of Etoricoxib drug (Arcoxia) and protective effect of parsley oil on the morphology and histology of kidney in albino rats fetouses in ages (1,7,15,30) days after birth. In this research, (60) albino rats were used (40) female and (20) male. After mating, pregnant mothers was divided into four groups:(control group, treatment group with Arcoxia drug, treatment group with parsley oil and treatment group with Arcoxia and parsley oil). The total fetouses were (624). Births outwardly and histologically were examined and weights and lengths for all groups were taken. Kidney was isolation for histological examination. It has been found significant decrease in weight and height of fetouses in the treatment group by drug at ages (1,7) day, also significant decrease in weight and height of fetouses in the treatment group by drug and parsley oil at ages (1,7,15) day. Microscopic examination showed in treatment group with Arcoxia drug atrophy some renal corpuscle with breadth of urinary space and integral tuft of capillaries. Karyolysis, pyknosis and haemorrhage were shown. While groups treated by Arcoxia with parsley oil, a natural appearance of glomeruli and urinary tubules and absence of haemorrhage have been observed. We conclude of this study, the drug affects on kidney, kidney functions and parsley oil had a protective role against toxity of drug. Generally advised to avoid eating Arcoxia except in cases of necessity. For a pregnant woman should consult specialist doctor with regard to take the medicine.
[Fawzyah Abdullah Mohammed Al-Ghamdi and Abeer Saleh Mohammed AL-Amri. **The protective role of parsley oil on kidney of the albino rat offsprings against toxity of Etoricoxib drug (Arcoxia).** *Life Sci J* 2016;13(9):48-77]. ISSN: 1097-8135 (Print) / ISSN: 2372-613X (Online). http://www.lifesciencesite.com. 7. doi:10.7537/marslsj130916.07.

Key words: Arcoxia; parsley oil**;** kidney; albino rats**.**

1. Introduction

Kidneys are responsible for removing waste products and extra water from the body in the form of urine. Structural and functional damage to the kidneys can lead to a variety of conditions, including kidney failure and kidney stones. Nephrotoxicity induced by several synthetic drugs represents a major problem of modern age population.

Certain herbs such as parsley might help maintain kidney health. Parsley (*Petroselinum crispum*) of the family Apiaceae, is a plant that reaches 30 cm in height, with composed leaves of bright green flowers in bunches with small seeds. Parsley tea is essentially made with the green leaves and is one of the medicinal herbs. Phytochemical screening of parsley has revealed the presence of flavonoids (apiin, luteolin, and apigenin-glycosides) **(Fejes et al., 2000)**, carotenoids **(Francis et al., 1989)**, ascorbic acid **(Davey et al., 1996)**, tocopherol, volatile compounds (myristicin, apiole), coumarines (bergapten, imperatorin) **(Fejes, 2000)**, phthalides, furanocoumarins, and sesquiterpenes. Its recognized roles are: as an antioxidant **(Fejes et al., 1998)**, anti-inflammatory agent, calcium-channel-blocker in intestine and uterus muscle, cancer preventive agent **(Zhang et al., 1999)**, and also has proved to have laxative **(Kreydiyyeh et al., 2001)**, antiulcerogenic and hypoglycemic properties **(Yanardag et al., 2003)**. Due to its high essential oil content, parsley seeds have a strong diuretic activity **(Darias et al., 2001)**. Moreover, *Petroselinum sativum* had a therapeutic effect on calcium oxalate stones in rats with nephrolithiasis and reduced the number of calcium oxalate deposits **(Saeidi et al., 2012)**.

Non steroidal anti-inflammatory drugs (NSAIDs) exhibit profound clinical efficacy being indicated in a variety of disease states based on their antipyretic, anti-inflammatory, antithrombotic, and analgesic utilities. These effects are principally achieved because their inhibition of cyclooxygenase (COX) halts prostaglandin (PG) synthesis (Laine et al., 2009; Risser et al., 2009). There are three recognized isoforms of COX, termed COX-1, COX-2, and COX-3 **(Lee et al., 2003; Hersh et al., 2005)**. Each NSAID is classified based on the specificity in the mechanism of action **(Laine et al., 2008)**. Non-selective NSAIDs such as diclofenac, ibuprofen, and indomethacin inhibit both COX-1 and COX-2 enzymes while COX-2- selective inhibitors (COXIBs) like rofecoxib, valdecoxib, and celecoxib block COX-2 **(Harirforoosh and Jamali, 2005)**. Etoricoxib (5-chloro-6-methyl-3-[4-(methyl sulfonyl) phenyl]-2-3'-bipyridine) is a selective COX-2 inhibitors that has been developed for treatment of osteoarthritis,

rheumatoid arthritis and pain **(Riendeau et al., 2001)**. Etoricoxib, being COX-2 inhibitor, has the therapeutic advantage of decreasing inflammation at the tissue sites particularly in joints, while sparing gastrointestinal mucosa due to continued prostaglandin production via the COX-1 isoform. However, COX-2 enzymes are also expressed at multiple nephron sites in the mammalian kidney including the cortical thick ascending limb, macula densa, medullary interstitial cells and the endothelium of arteries and veins as well as glomerular podocytes **(Harris, 2007)**. Thus, it is possible that inhibition of COX-2 enzymes may be associated with alterations in renal functions.

Aim

The aim of the present experimental stud was to investigate the effect of intraperotineal adminstartion of the COX-2 selective inhibitor, Etoricoxib to the pregnant rats for 7 days on the offspring general body morphology and kidney functions and structure. Since parsley has been known as a plant with great antioxidant capacity, we used the herb to treat possible damages to kidneys caused by the applied drug.

2. Materials and Methods

Chemicals

Etoricoxib in the form of tablets was purchased from Merk Sharp and Dom Company, Jeddah, Saudi Arabia. Parsley oil was purchased from Contemporary dreams, Jeddah, Saudi Arabia.

Animals

Sixty adult Albino rats (40 females and 20 males) weighing from 200-250 grams were used in this experimental study. Animals were housed in clean stainless steel cages; the cage size was 30cm x 60cm x 30cm. Each cage contained one male and two females in proestrous for 1-3 days in the animal house of King Fahd center, King Abdelaziz University, Jeddah, Saudi Arabia. The rats were maintained on a natural light-dark cycle in an aerated room, temperature, food (standard rat pellets) and water available ad libitum. The rats were habituated to handling and testing environment for four days before the start of the experiments. The experimental procedures were carried out according to the guidelines of experiments on animals of King Abdelaziz University, Jeddah, Saudi Arabia and approved by local ethical committee for scientific research.

Experimental design

Rats were randomly divided into four groups. **Group 1 (normal control group)**: It consisted of 10 pregnant female rats. The rats received intraperitoneal with 2 ml distilled water (DW) (vehicle) in the same volume as the treated groups for consequent 7 days from the eight day of pregnancy till day fourteen. **Group 2 (Etoricoxib treated group):** It consisted of 10 pregnant female rats treated with intraperitonrsl injection of Etoricoxib at dose of **(2 mg/Rat)** for consequent 7 days from the eight day of till day fourteen as this is the period of organ formation. **Group 3 (Parsley oil treated group):** It consisted of 10 pregnant female rats treated with intraperitonial injection of Parsley oil at dose of **(0,5 mg/Rat) (El-shall and Badr, 2012)** for 7 consequent days from eight days of pregnancy till day fourteen. **Group 4 (Etoricoxib & Parsley oil treated group):** It consisted of 10 pregnant female rats treated with intraperitonrsl injection of Etoricoxib at dose of **(2 mg/Rat)** then intraperitonial injection of Parsley oil at dose of **(0,5 mg/Rat)** for 7 consequent days from eight days of pregnancy till day fourteen.

In all groups, after delivery, twelve of offspring were taken at each age 1, 7, 15 and 30 days for examination of external appearance for any abnormalities or congenital anomalies, also, weight and height were determined and recorded. The blood samples were collected from offspring at days 7, 15 and 30 but not at the day 1; meanwhile urine samples were collected only on days 15 and 30 due to small size of offspring and difficulty to obtained samples from them. Then offspring were anesthetized by ether and scarified by cervical dislocation. Then abdomen was opened longitudinally and kidneys were dissected and removed for histological examination.

Determination of estrous cycle

The phases of estrous cycle were determined by observing the vaginal smear in the morning (8:00 - 10:00 am). A toothpick covered with cotton moistened with saline was inserted into the upper vagina and vaginal smears were taken and then spread over the glass slides. The slides were fixed in a solution of equal parts of ether and 95% alcohol, stained with haematoxylin & eosin (H & E) stain, dehydrated, mounted and examined with light microscope. Before fertilization, proestrous was determined if vaginal swap contained little numbers of cornified cells and large numbers of epithelial cells and absence of white blood cells. In the next day, increase in cornified cells occurred and this phase was estrous phase **(Uphouse et al., 1984)**, estrous phase repeated every 4-5 days in rats and mice females **(Taylor, 1986)**. Fertilization was determined by appearance of sperms and according that was day one of pregnancy **(Butkevich et al., 2003)**.

Sample Collection

Immediately at the end of the experiments, blood samples collected from the retro-orbital venous plexus in plain tubes, centrifuged at 3,000 revolutions per minute for 15 minutes, then the clear, non-hemolysis supernatant quickly removed, and kept at -20 ºC until used. Urine samples from collected from urinary bladder into plain tubes, centrifuged at 3,000 revolutions per minute for 15 minutes, then the clear,

supernatant quickly removed, and kept at -20 ºC until used.

Histopathological Examination

Immediately after sacrifice the animals, the kidneys were dissected and fixed in 10% neutral-buffered formalin, and then processed for paraffin sections. Sections (5 um thick) were stained with Hematoxylin and Eosin by the method of **Durry and Wallinngton (1980)**.

Statistical analysisaa

The data of each group were analyzed using the Statistics Package for Social Sciences (SPSS) version 20. The data were expressed as arithmetic mean and standard deviation of the mean (SD). The differences between groups were analyzed using one way analysis of variance (ANOVA), least significant difference (LSD) equation for parametric parameters. A P value less than or equal 0.05 was considered significant.

3. Results and Discussion

This study consisted of four groups each group consists of 10 pregnant females' rats. The females of the first group (control) born 154 newborn (80 males and 74 females); of the second group (Etoricoxib treated) born 179 newborn (82 males and 97 females); of the third group (Parsley treated) born 147 newborn (93 males and 54 females); and of the forth group (Etoricoxib and Parsley treated) born 144 newborn (57 males and 87 females) (Table 1).

Table (1): Number of mothers and bubs in different studied groups at 1, 7, 15 and 30 days of age.

Groups / Day	Number of fetous of control group			Number of fetous of treated group by Etoricoxib drug			Number of fetous of treated group by Parsley oil			Number of fetous of treated group by Etoricoxib drug and Parsley oil		
	Mothers Number	♂	♀	Mothers Number	♂	♀	Mothers Number	♂	♀	Mothers Number	♂	♀
1-day	10	27	20	10	28	33	10	30	16	10	20	31
7-days	10	20	21	10	22	31	10	20	19	10	17	23
15-days	10	19	23	10	21	18	10	25	12	10	12	19
30-days	10	14	10	10	11	15	10	18	7	10	8	14
Total	40	80	74	40	82	97	40	93	54	40	57	87
Total number in each group	154			179			147			144		
Total number in all groups	624											

External appearance, malformation and mortality

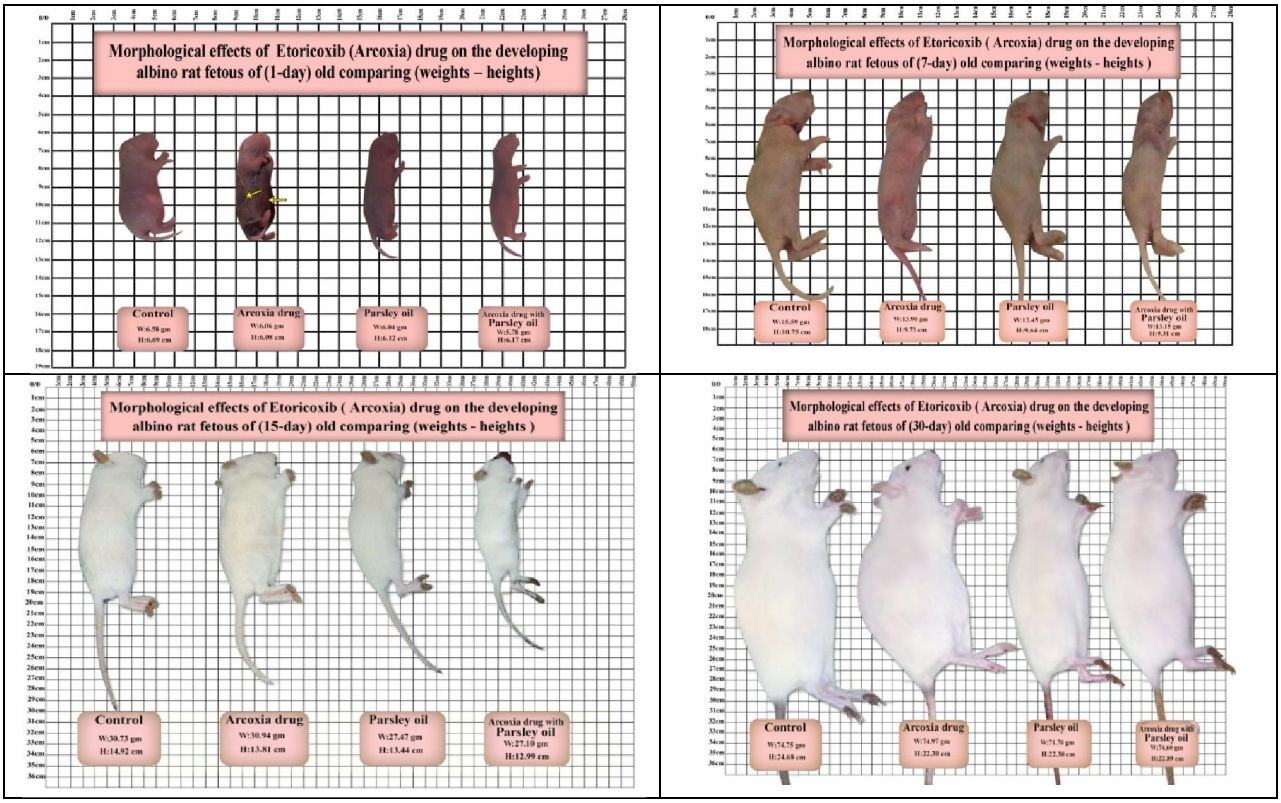
Examination of the external appearance of newborn of the Etoricoxib treated group showed that edema of the abdominal region and skin folding at day 1 after bith; atrophy of whole body at day 7 after birth; edema of the body at days 15 and 30 after birth compared with control group. **Siu and his colleagues (2000)** reported that NSAID cross the placenta and caused malformation. Others reported that side effects of NSAID as naproxen, ketoprofen, ibuprofen were intracranial hemorrhage, pulmonary hypertension, disturbance of renal functions, oligohydraminos **(Roubenoff et al., 1988; Ostensen, 1996)**, diaphragmatic hernia, umbilical hernia, defect of cardiac septum **(Kauffman, 1989; Kozer et al., 2002 & 2003; Cook et al., 2003; Burdan et al., 2006 a &b; Ofori et al., 2006),** growth retardation **(Reese et al., 2000; Burdan et al., 2003)**, abortion, cleft lips **(Ericson and Kallen, 2001)**, skeletal and central nervous sytem defects (**Brent, 2001; Seidenberg and An, 2004; Burdan 2005b; Casanova et al., 2005; El-Sayyad et al., 2010; Antonucci et al., 2012**). **Badawy et al., 2011** reported decreased in femur thickness in rat's mothers that had been injected with NSAID (meloxicam, celecoxib). Injection of pregnant rats with a celecoxib (0.2 mg / kg) led to a significant reduction in newborn body size body, in addition to a number of congenital malformations including convexity of the body, deformation of the front and hind limbs; bleeding under the skin in the regions of head, neck and torso; as well as decreased in the length of mandible, scapula, humerus, femur and tibia. **Burdan (2000)** interpreted that the occurrence of superficial bleeding to be due to inhibition of enzymes cyclic oxidation.

In this study, there was no mortality among pregnant mothers treated with Etoricoxib. In contrast, others reported that prenatal exposure to anti-inflammatory drugs leads to increased incidence of abortion **(De-Kun et al., 2003)** and increased mortality in the offspring **(Brent, 2001; Casanova et al., 2005; Burdan et al., 2009)**.

Body weight and height

In this study, in Parsley oil treated group, the body weights in offspring were significant decrease at age 1, 7 and 15 day after birth (P =0.001, P =0.0001, P

=0.042) but showed insignificant changes at day 30 after birth (P =0.550) when compared to the control group. Meanwhile, the body height in offspring were significant decrease at age 1, 7, 15 and 30 day after birth (P =0.0001, P =0.0001, P =0.014, P =0.044) compared to the control group (Table 2). In consistency with our results, **Rezazade and Farokhi (2014**) reported statistically significant decreased in body weight in rats treated with parsley seeds compared to the control group. Decreased in body weight in parsley seeds treated group (Petroselinumcrispum) may be contributed to their diuretic **(Darias et al., 2001)**, laxative **(Kreydiyyeh et al., 2001)**, and hypoglycemic effects **(Yanardag et al., 2003)**. In contrast, **Rashwan (2012)** found statistically significant increased in the body weight in rats treated with parsley oil extract compared to the control group.



In this study, in Etoricoxib treated group, the body weights in offspring were significant decrease at age 1 and 7 days after birth (P =0.0001, P =0.001) but showed insignificant changes at 15 and 30 days after birth (P =0.889, P =0.963) when compared to the control group (Table 2). In consistence, **Badawy et al. (2011)** reported that NSAID (meloxicam and celecoxib) caused significant decreased in body weight of Albino rat's fetus. Deacreased in birth body weight indicated intrauterine growth retardation **(Wigglesworth, 1964; Barr and Brent, 1970; Brent and Jensh, 1976)** due to the inhibitory effect of drugs on cell division **(Kuwayaman et al., 1990)**. In this study, in Etoricoxib treated group, the body height in offspring were significant decrease at age 1 and 7 day after birth (P =0.0001, P =0.0001) but showed insignificant changes at 15 and 30 days after birth (P =0.054, P =0.070) when compared to the control group (Table 2). **Burdan (2005a)** reported that decreased in body length in Etoricoxib treated group may be due to delayed ossification centers formation.

In this study, in Etoricoxib & Parsley oil treated group, the body weights and heights in offspring were significant decrease at age 1, 7 and 15 day after birth (P =0.0001, P =0.0001, P =0.029 and P =0.0001, P =0.0001, P =0.002) but showed insignificant changes at 30 day after birth (P =0.977 and P =0.153) when compared to the control group (Table 2). These results revealed the synergistic effects of Etoricoxib and Parsley in decreasing body weight and height.

Kidney functions

In this study, insignificant changes were found in the serum levels of sodium, potassium, chloride, creatinine and albumin between Parsley treated and control groups (Table 3). In contrast, **Al-Helali (2012)** reported significant decreased in serum levels of sodium, potassium and urea nitrogen in rats treated with Parsley compared to control group that may be

due to Parsley diuretic effect **(Fischbach, Dunning, 2009; Sood, 2009b; Banasik, Emerson, 2010)**. In this study, significant decreased was found in serum level of urea nitrogen at day 30 in Parsley oil treated compared to control groups which indicate the ability of Parsley to excrete urea nitrogen waste product from the blood. In consistency with our result, **Al-Helali (2012)** reported decreased in serum levels of urea nitrogen in rats group treated with Parsley compared with control group. In this study, significant increased was found in serum level of uric acid at day 15 but insignificant changes were found at days 7 and 30 after birth in Parsley oil treated compared to control groups (Table 3). In consistency with our result, **Al-Helali (2012)** reported increased in serum levels of uric acid in rats group treated with Parsley compared with control group. **Rashwan (2012)** reported increased in serum levels of total proteins and globulin, but significant decreased in serum levels of creatinine, urea and uric acid in rats group treated with Parsley compared with control group. **Haidari (2011)** reported that in rats Parsley significantly decreased serum levels of uric acids in rats complained from high blood lvels of uric acids but did not affected levels in rats with normal uric acid level.

Table (2): Changes in body weights (gram) and height (cm) in different studied groups at different days versus control.

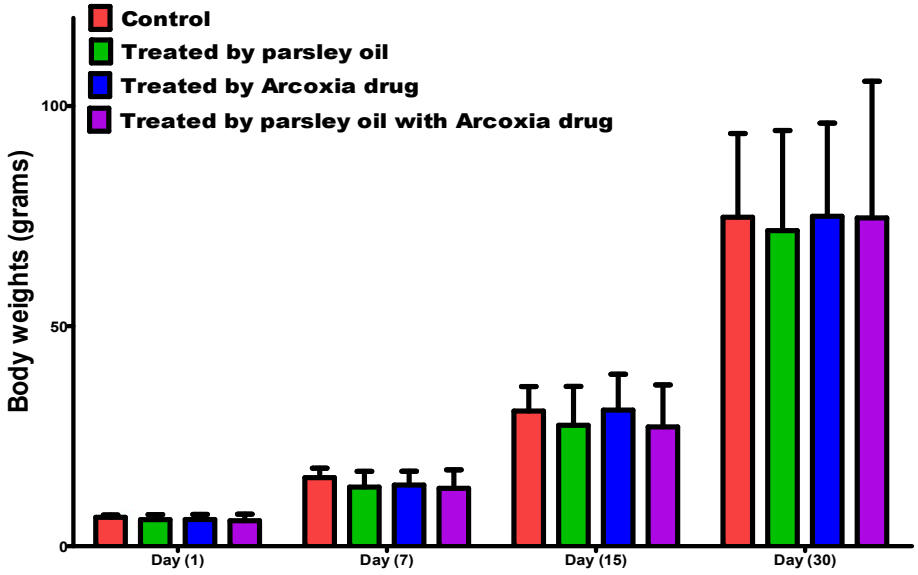
Days	Groups	Body weight (gram)		Height (cm)	
		Mean± SD	Significance	Mean±SD	Significance
1-day	**Control** (n =124)	6.58±0.53	-	6.69±0.29	-
1-day	**Treated by parsley oil** (n =73)	6.04±1.14	**0.001**	6.12±0.60	**0.0001**
1-day	**Treated by Etoricoxib drug** (n =88)	6.06±1.16	**0.0001**	6.08±0.44	**0.0001**
1-day	**Treated byEtoricoxib drug with parsley oil** (n =65)	5.78±1.50	**0.0001**	6.17±1.43	**0.0001**
7-days	**Control** (n =89)	15.59±2.13	-	10.75±0.90	-
7-day	**Treated by parsley oil** (n =49)	13.45±3.57	**0.0001**	9.64±1.50	**0.0001**
7-days	**Treated by Etoricoxib drug** (n =61)	13.90±3.15	**0.001**	9.73±1.88	**0.0001**
7-days	**Treated byEtoricoxib drug with parsley oil** (n =43)	13.15±4.21	**0.0001**	9.31±2.63	**0.0001**
15-days	**Control** (n =62)	30.73±5.54	-	14.92±0.94	-
15-day	**Treated by parsley oil** (n =38)	27.47±8.85	**0.042**	13.44±3.35	**0.014**
15-days	**Treated by Etoricoxib drug** (n =44)	30.94±8.12	0.889	13.81±3.29	0.054
15-days	**Treated byEtoricoxib drug with parsley oil** (n =34)	27.10±9.55	**0.029**	12.99±4.15	**0.002**
30-days	**Control** (n =52)	74.75±19.02	-	24.68±2.39	-
30-days	**Treated by parsley oil** (n =29)	71.70±22.73	0.550	22.30±6.33	**0.044**
30-days	**Treated by Etoricoxib drug** (n =36)	74.97±21.14	0.963	22.69±5.70	0.070
30-days	**Treated byEtoricoxib drug with parsley oil** (n =25)	74.60±31.03	0.977	22.89±7.22	0.153

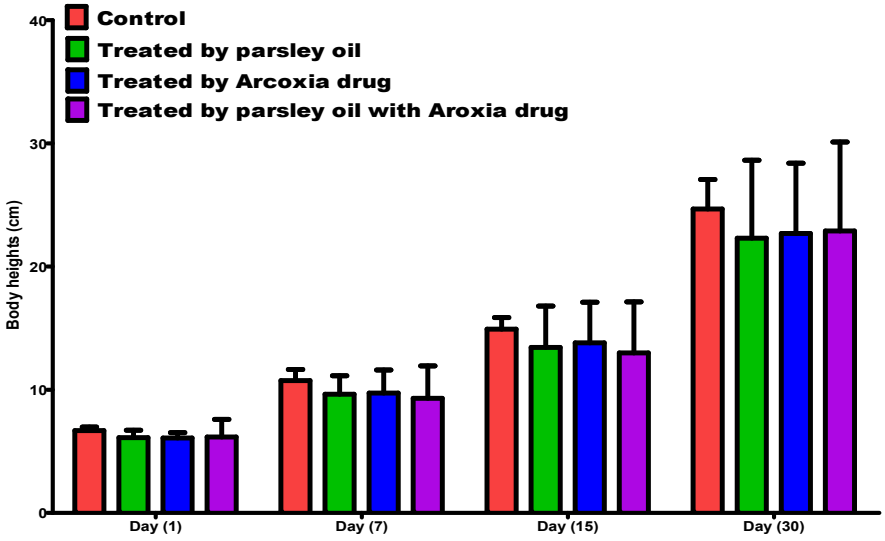
Statistic analysis was made using OneWay ANOVA test (LSD)

In this study, insignificant changes were found in the urinary levels of sodium, potassium, chloride, creatinine, calcium and urea nitrogen between Parsley treated and control groups at days 15 and 30. Meanwhile, significant increased in urinary uric acid level at day 30 and urinary micro-albumin at day 15 were found in Parsley treated compared to control groups (Table 4). In this context, **Wood et al. (2013)** reported insignificant changes in urinary levels of sodium, potassium, chlorine, creatinine, calcium and uric acid in people adminstrated parsley leaf tea. While, **Al-Helali (2012)** recoded significant increased in urinary proteins excretion after Parsley administration in rats.

In this study, in Arxocia treated group, there were insignificant changes in the serum levels of sodium (at days 7, 15 and 30 after birth); but significant increased in serum potassium and urea nitrogen (at days 7, 15 and 30 after birth); serum creatinine (at days 7 and 15 after birth); serum uric acid and calcium (at days 15 and 30 after birth) in Parsley treated compared to control groups (Table 3). In a study conducted by **Huskinsson et al. (1974)**, they found that administration of fenoprofen or asprine (NSAID) in rheumatoid arthritis patients caused significant increase in serum urea at the beginning of the experiment and also an increase in excretion of uric acid in urine, which was higher in the aspirin compared fenoprofen treated group. **Moustafa et al. (1989)** reported rise in the serum levels of urea in rats treated with Zanjabil (NSAID). Meanwhiles, others reported that administration of NSAID led to significant increased in plasma levels of urea and creatinine and changes in kidney tissue structure **(Gilman et al., 1980; Stillman et al., 1984; Rainsford, 1984; Moustafa, 1989). Hickey et al. (2001)** reported rise in the serum levels of urea nitrogen in rats treated with diclofenac sodium (100, 200, 300 mg/kg) compared to the control group. **Blackshear et al. (1985)** reported that NSAID administration led to significant increased in the serum levels of urea nitrogen, creatinine and potassium.

Lifschitz (1983) reported that administration of NSAID led to increase in serum levels of potassium through inhibition of renin secretion from juxtaglomerular apparatus that led to inhibition of aldosterone secretion. **Tripathy and Dash (2010)** reported that treatment with etoricoxib (inhibitor Cox-2) causes an increased in the serum levels of potassium in the patients.





In this study, in Arxocia treated group, there were significant decreased in the serum levels of chloride (at days 15 and 30 after birth); total proteins (at days 7, 15 and 30 after birth); albumin (at day 30 after birth) compared to control groups (Table 3). In this respect, **Swan et al. (2006b)** reported that diclofenac sodium administration did not affect serum albumin level. Meanwhile, **Thanagariet al. (2012)** reported that diclofenac sodium administration led to significant increased in serum levels of urea and creatinine but significant decreased in total protein and albumin in rats.

Table (3): Comparison of serum levels of different measured parameters in different studied groups at ages 7, 15, 30 days versus control.

Variables (n =12)	**7 days**		**15 days**		**30 days**	
	Mean±SD	**Significance**	**Mean±SD**	**Significance**	**Mean±SD**	**Significance**
Serum sodium (mmol/L)						
group 1 (control)	138.25±4.75		139.00±3.13		138.0±5.33	
group 2 (Parsley oil)	137.17±4.24	0.704	137.00±4.39	0.094	136.50±5.49	0.595
group 3 (Etoricoxib drug)	140.08±4.19	0.090	141.08±3.23	0.082	142.92±4.14	0.087
group 4 (Etoricoxib + Parsley oil)	143.00±6.98	0.100	139.00±1.04	1.000	136.67±12.24	0.638
Serum potassium (mmol/L)						
group 1 (control)	3.83±0.47		4.07±0.82		3.79±0.58	
group 2 (Parsley oil)	3.77±0.64	0.092	3.95±0.05	0.580	3.58±0.33	0.379
group 3 (Etoricoxib drug)	9.33±0.98	**0.0001**	7.20±0.73	**0.0001**	6.37±0.46	**0.0001**
group 4 (Etoricoxib + Parsley oil)	7.53±3.35	**0.0001**	5.70±0.31	**0.0001**	5.79±1.02	**0.0001**
Serum chloride (mmol/L)						
group 1 (control)	104.75±2.38		99.92±3.90		133.33±2.93	
group 2 (Parsley oil)	103.42±3.37	0.666	99.67±5.07	0.891	134.83±2.04	0.515
group 3 (Etoricoxib drug)	102.00±4.43	0.374	60.25±3.60	**0.0001**	101.17±3.24	**0.0001**
group 4 (Etoricoxib + Parsley oil)	108.33±10.53	0.074	59.67±4.31	**0.0001**	96.25±11.24	**0.0001**
Serum creatinine (umol/L)						
group 1 (control)	52.03±2.42		79.58±4.23		80.73±5.07	
group 2 (Parsley oil)	50.69±2.74	0.396	77.50±4.95	0.397	77.84±1.91	0.091
group 3 (Etoricoxib drug)	79.10±4.74	**0.0001**	99.75±5.59	**0.0001**	81.00±1.54	0.870
group 4 (Etoricoxib + Parsley oil)	78.11±5.25	**0.0001**	82.00±4.77	0.283	64.75±5.04	**0.0001**
Serum calcium (mmol/L)						
group 1 (control)	2.01±0.59		2.67±0.32		2.30±0.5	
group 2 (Parsley oil)	2.05±0.56	0.862	2.63±0.07	0.540	2.42±0.25	0.372
group 3 (Etoricoxib drug)	1.65±0.07	0.102	2.80±0.07	**0.044**	2.73±0.18	**0.002**
group 4 (Etoricoxib + Parsley oil)	1.75±0.35	0.235	2.51±0.11	**0.017**	2.32±0.41	0.895
Serum urea nitrogen (umol/L)						
group 1 (control)	4.95±0.32		4.55±0.75		7.06±1.20	
group 2 (Parsley oil)	4.88±0.72	0.951	4.45±0.72	0.830	6.01±0.45	**0.016**
group 3 (Etoricoxib drug)	10.50±4.15	**0.0001**	10.19±2.31	**0.0001**	7.25±0.93	**0.0001**
group 4 (Etoricoxib + Parsley oil)	9.17±4.98	**0.001**	9.20±0.21	**0.0001**	8.96±2.38	**0.0001**
Serum albumin (g/L)						
group 1 (control)	45.72±0.66		38.19±4.66		48.41±3.79	
group 2 (Parsley oil)	43.22±2.21	0.785	36.65±3.85	0.389	46.71±4.78	0.247
group 3 (Etoricoxib drug)	29.33±4.81	0.078	35.92±3.09	0.165	23.58±3.20	**0.0001**
group 4 (Etoricoxib + Parsley oil)	31.65±4.66	0.128	37.00±2.34	0.464	33.58±3.99	**0.0001**
Serum uric acid (umol/L)						
group 1 (control)	176.50±31.98		95.42±6.20		98.25±5.89	
group 2 (Parsley oil)	186.92±42.48	0.740	100.50±3.85	**0.005**	100.25±5.14	0.412
group 3 (Etoricoxib drug)	160.67±64.50	0.614	210.58±4.27	**0.0001**	186.67±6.92	**0.0001**
group 4 (Etoricoxib + Parsley oil)	183.00±80.27	0.836	205.50±4.34	**0.0001**	183.167±7.78	**0.0001**
Serum alkaline phosphatase (U/L)						
group 1 (control)	130.24±2.68		112.58±6.05		119.33±3.39	
group 2 (Parsley oil)	128.17±2.52	0.349	120.83±3.97	**0.0001**	122.00±4.31	0.348
group 3 (Etoricoxib drug)	136.25±7.17	**0.008**	378.58±6.84	**0.0001**	220.42±7.25	**0.0001**
group 4 (Etoricoxib + Parsley oil)	133.33±5.42	0.164	212.50±3.66	**0.0001**	316.08±4.54	**0.0001**
Serum total protein (g/L)						
group 1 (control)	66.42±5.21		57.42±4.01		62.50±7.66	
group 2 (Parsley oil)	65.58±7.18	0.618	58.08±4.21	0.656	58.17±8.39	0.054
group 3 (Etoricoxib drug)	30.67±0.49	**0.0001**	42.00±3.88	**0.0001**	52.58±3.58	**0.0001**
group 4 (Etoricoxib + Parsley oil)	32.00±0.85	**0.0001**	41.58±4.17	**0.0001**	53.00±0.85	**0.0001**

Statistic analysis was made using OneWay ANOVA test (LSD)

Table (4): Comparison of urinary levels of kidney functions in different studied groups at age 15 and 30 days versus control.

Variables (n =12)	**15 days**		**30 days**	
	Mean±SD	**Significance**	**Mean±SD**	**Significance**
Urine sodium (mmol/L)				
group 1 (control)	113.08±5.60		120.58±5.18	
group 2 (Parsley oil)	116.42±5.66	0.067	118.00±4.43	0.131
group 3 (Etoricoxib drug)	99.25±4.05	**0.0001**	97.75±4.00	**0.0001**
group 4 (Etoricoxib + Parsley oil)	105.00±3.93	**0.0001**	100.58±4.72	**0.0001**
Urine potassium (mmol/L)				
group 1 (control)	51.27±3.56		52.18±3.70	
group 2 (Parsley oil)	50.67±3.85	0.673	50.92±4.27	0.369
group 3 (Etoricoxib drug)	56.83±4.53	**0.0001**	62.43±3.66	**0.0001**
group 4 (Etoricoxib + Parsley oil)	54.07±3.24	0.053	49.23±4.13	**0.048**
Urine chloride (mmol/L)				
group 1 (control)	82.00±3.95		88.83±4.47	
group 2 (Parsley oil)	80.17±4.17	0.208	91.00±5.86	0.242
group 3 (Etoricoxib drug)	60.75±3.86	**0.0001**	46.33±4.10	**0.0001**
group 4 (Etoricoxib + Parsley oil)	59.42±3.70	**0.0001**	59.67±2.74	**0.0001**
Urine creatinine (umol/L)				
group 1 (control)	8.00±0.52		9.00±1.43	
group 2 (Parsley oil)	9.89±0.49	0.167	10.25±0.88	0.875
group 3 (Etoricoxib drug)	12.21±0.49	**0.003**	7.78±0.67	0.878
group 4 (Etoricoxib + Parsley oil)	11.44±0.66	**0.014**	9.68±1.02	0.932
Urine calcium (mmol/L)				
group 1 (control)	2.71±0.48		3.05±0.41	
group 2 (Parsley oil)	2.64±0.30	0.597	3.12±0.42	0.640
group 3 (Etoricoxib drug)	2.83±0.24	0.387	2.72±0.43	**0.030**
group 4 (Etoricoxib + Parsley oil)	2.54±0.41	0.215	2.26±0.23	**0.0001**
Urine urea nitrogen (umol/L)				
group 1 (control)	785.45±24.11		730.03±35.25	
group 2 (Parsley oil)	780.17±15.10	0.391	719.83±16.74	0.336
group 3 (Etoricoxib drug)	512.43±15.14	**0.0001**	510.35±25.14	**0.0001**
group 4 (Etoricoxib + Parsley oil)	792.83±8.74	0.233	632.50±24.01	**0.0001**
Urine uric acid (umol/L)				
group 1 (control)	1135.50±10.87		656.50±46.28	
group 2 (Parsley oil)	1127.92±6.57	0.341	696.83±32.32	**0.001**
group 3 (Etoricoxib drug)	1293.67±7.15	**0.0001**	938.75±16.66	**0.0001**
group 4 (Etoricoxib + Parsley oil)	1212.03±46.75	**0.0001**	892.17±25.41	**0.0001**
Urine Microalbumine (mg/L)				
group 1 (control)	5.16±0.59		5.15±0.51	
group 2 (Parsley oil)	6.83±0.43	**0.0001**	5.15±0.30	0.989
group 3 (Etoricoxib drug)	8.28±0.79	**0.0001**	6.08±0.82	**0.004**
group 4 (Etoricoxib + Parsley oil)	7.67±0.64	**0.0001**	5.69±0.07	0.085

Statistic analysis was made using OneWay ANOVA test (LSD)

Aprioku and Uche (2013) observed a statistically significant increased in the serum levels of urea and creatinine, while insignificant changes in total proteins in rats treated with NSAID (aspirin, ibuprofen and diclofenac sodium). **Wood et al. (2013)** reported significant decreased in serum levels of sodium and potassium in rats treatment with NSAID (celecoxib 40 mg/kg), group treatment with diclofenac sodium (10 mg/kg), group treated with a drug repamide with celecoxib, and group treated with repamide with diclofenac sodium, but significant increased in blood urea nitrogen in the different groups compared to the control group.

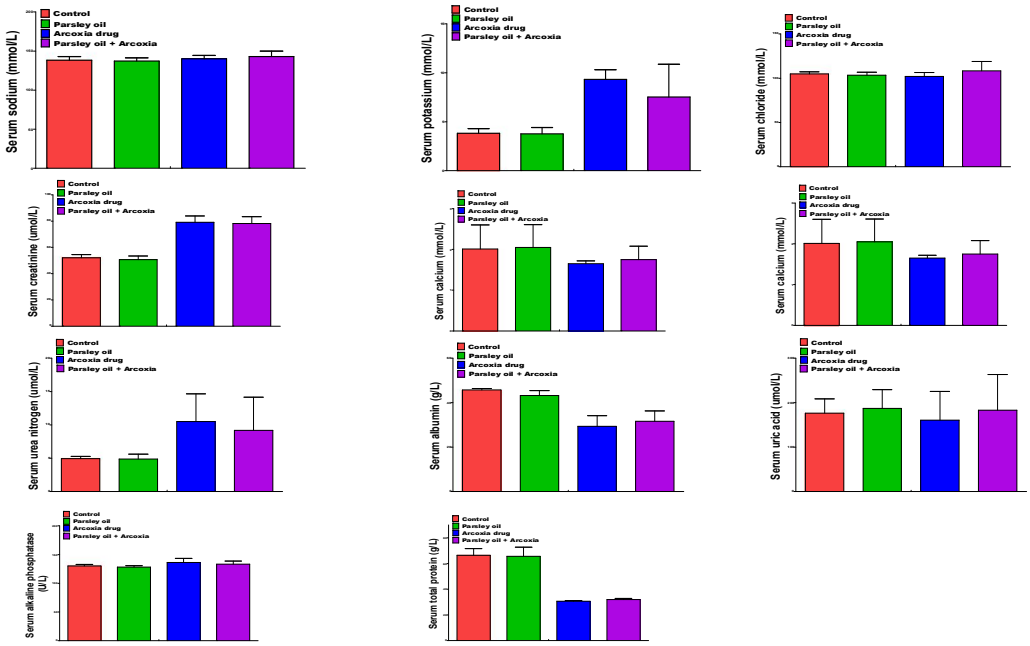
In this study, in Arxocia treated group, there were significant decreased in the urinary levels of sodium, chloride and urea nitrogen (at days 15 and 30 after birth) and calcium (at day 30 after birth) compared with control group. Meanwhile, there were significant increased in the urinary levels of potassium, uric acid, microalbumin (at days 15 and 30 after birth) and creatinine (at day 15 after birth) compared with control group (Table 4). **Harirforoosh et al. (2005)** reported that in rat's once oral

administration of rofecoxib, celecoxib, diclofenac and flurbiprofen but not meloxicam for four days led to significant decreased in urinary levels of sodium and potassium compared to control group. **Kadokawa et al. (1979)** reported that administration of NSAID led to significant decreased in urinary sodium excretion. **Cheng, Harris (2004**) reported that administration of cyclooxygenase inhibitors (COX-2) led to decrease in urinary sodium excertion. **Hemal et al. (1989)** reported significant decrease in urinary excretion of calcium in rats treated with NSAID (indomethacin) but insignificant changes in urinary exceretion of creatinine, calcium and uric acid in rats treated with diclofenac sodium (50 mg three times a day by mouth).

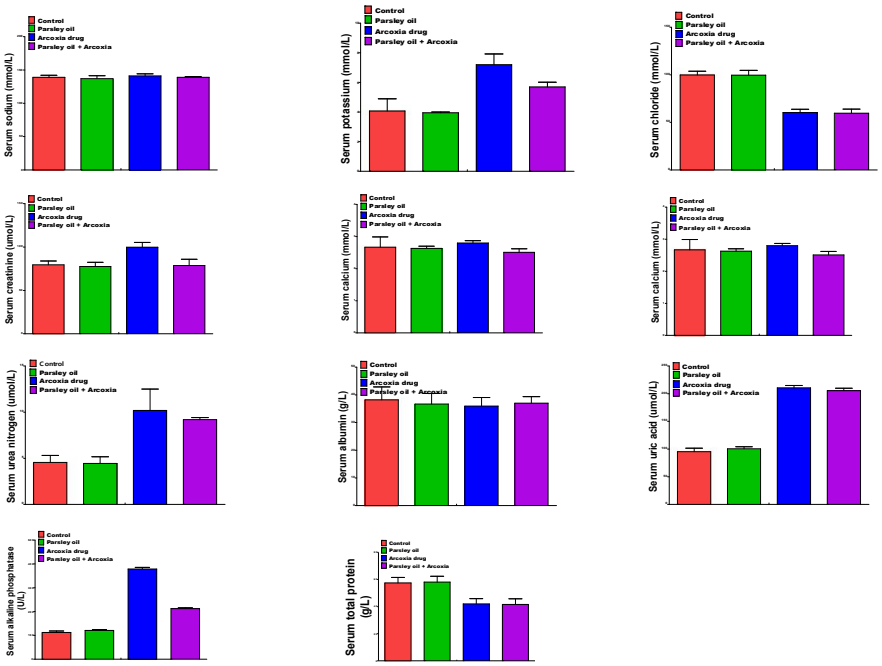
In this study, in Arxocia & Parsley treated group, there were insignificant changes in the serum levels of sodium (at days 7, 15 and 30 after birth) compared to control group. Meanwhile, there were significant increased in serum levels of potassium and urea nitrogen (at days 7, 15 and 30 after birth); uric acid (at days 15 and 30 after birth) and creatinine (at day 7 after birth) compared to control group. There were significant decreased in serum levels of chloride (at days 15 and 30 after birth); calcium (at day 15 after birth); albumin (at day 30 after birth), total proteins (at days 7, 15 and 30 after birth) and and creatinine (at day 30 after birth) compared to control group (Table 3). In this respect, **Saeidi et al. (2012**) reported that drugs that led to renal toxicity as ethylene glycol in rats leads to a statistically significant increased in serum levels of urea, uric acid and creatinine and these substances decreased significantly after treatment with watery extract from Parsley. **Elgazar and AboRaya (2013)** reported significant decreased in serum levels of urea, nitrogen and creatinine in rats treated with gentamicin after oral administration of parsley extract, watercress and turmeric separately; and significant decreased in serum levels of sodium and potassium in rats treated with a drug gentamicin after oral administration of parsley extract, watercress and turmeric separately or a mixture of these three herbs. Parsley extract can lead to the stability of the plasma membrane as well as the repair of damaged hepatic tissue and prevent or slow the oxidative damage in the epithelial cells of the liver and kidney cells caused by taking anti-inflammatories **(Zama et al., 2007).**

In this study, in Arxocia & Parsley treated group, there were significant decreased in the urinary levels of sodium and chloride (at days 15 and 30 after birth); and potassium, calcium and urea nitrogen (at day 30 after birth) compared with control group. Meanwhile, there were significant increased in the urinary levels of creatinine and microalbumin (at day 15 after birth) and uric acid (at days 15 and 30 after birth) compared with control group (Table 4).

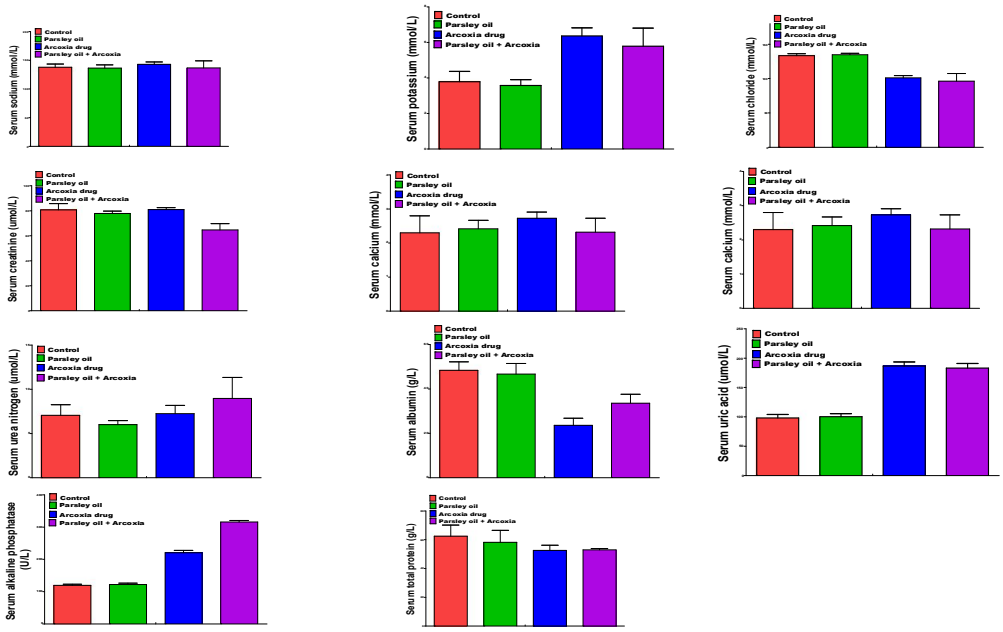
Compared to the difference in average serum components of blood between the control group and groups treated with (Arcoxia drug, parsley oil, Arcoxia drug and parsley oil) to the white rat infants at the age of (7- day).



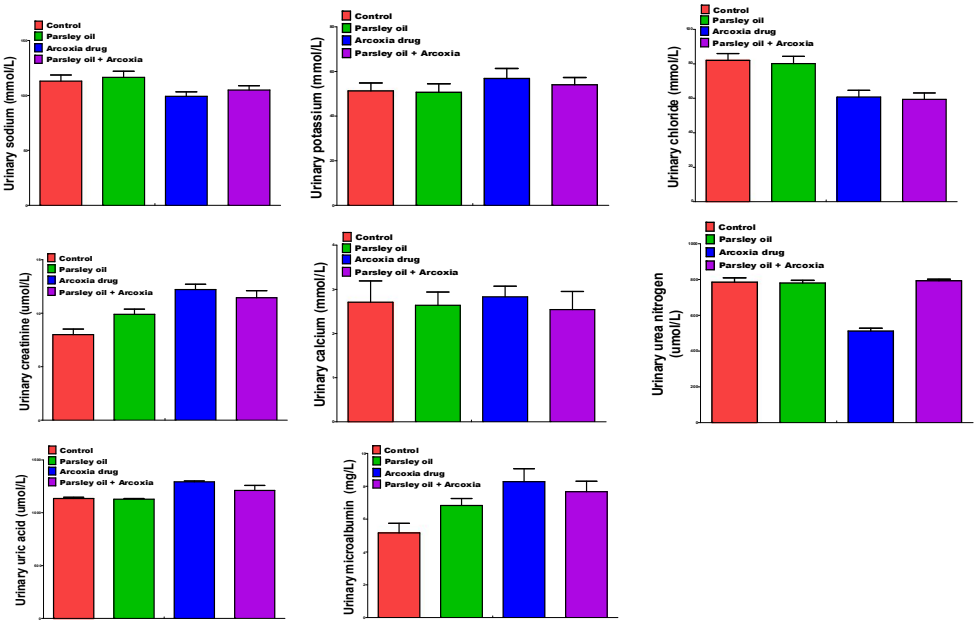
Compared to the difference in average serum components of blood between the control group and groups treated with (Arcoxia drug, parsley oil, Arcoxia drug and parsley oil) to the white rat infants at the age of (15- day).



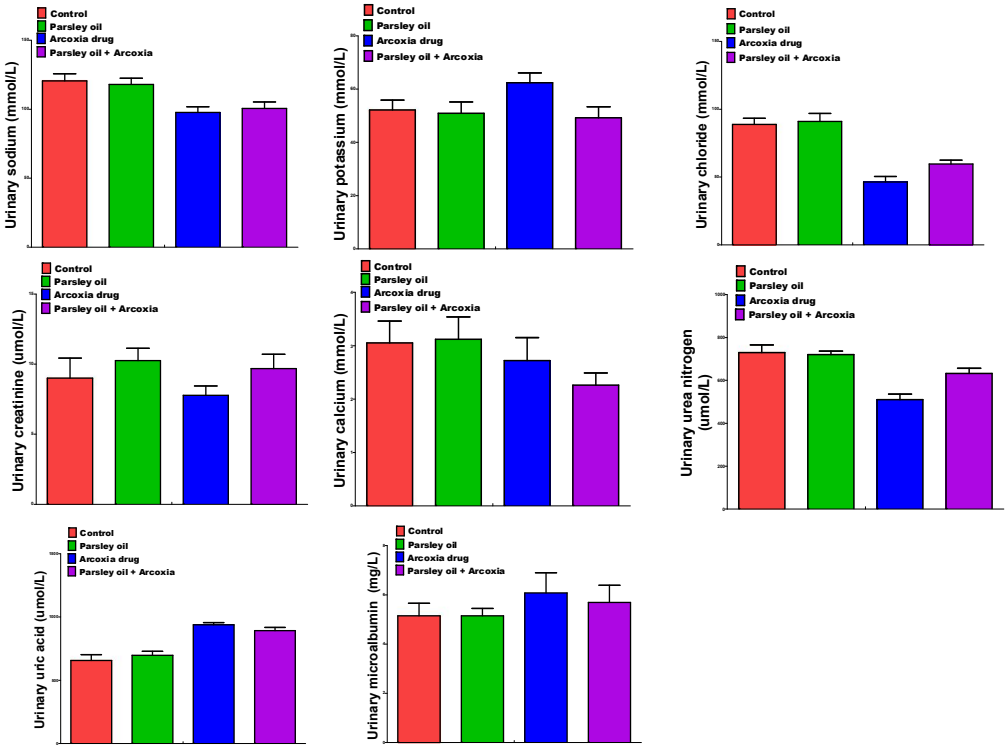
Compared to the difference in average serum components of blood between the control group and groups treated with (Arcoxia drug, parsley oil, Arcoxia drug and parsley oil) to the white rat infants at the age of (30- day).



Compared to the difference in average urine components between the control group and groups treated with (Arcoxia drug, parsley oil, Arcoxia drug and parsley oil) to the white rat infants at the age of (15- day).



Compared to the difference in average urine components between the control group and groups treated with (Arcoxia drug, parsley oil, Arcoxia drug and parsley oil) to the white rat infants at the age of (30- day).



Histological studies

Morphogenesis and Histogeneses of the developing Kidney.

1-day old albino rats fetuses

1-day old control albino rats fetuses(1)

When Histological examination by the light microscopy in the control kidney samples of fetuses rats at age (1 day) shows that the tissue sections of the

kidney looks like a grain of beans, having the outer convex edge and inner concave edge, the kidney has divided into two major structures: the outer renal cortex and the inner renal medulla.

Also we havenoted a thin layer of fibrous connective tissue forms the renal capsule surrounding each kidney, and contains the cortex area on the renal corpuscles and the renal tubules and consist each renal corpuscle of the glomerulus(G). Glomerulus is a tuft of capillaries based on the basement membrane of the glomeruli, It is surrounded by a cup-like sac known as Bowman's capsule.

Bowman's Capsule (BC) is composed of two layers: The parietal epithelium of layer (pl) Bowman's Capsule which is a layer of simple squamous epithelium lining the outer border of the corpuscle and the inner layer of Visceral epithelia layer (VL) which is lined with large circular cells and nuclei contain a large circular base pigment called podocytes and is based on the outer surface of the capillaries of glomeruli. The space between the parietal layer and visceral layer called Urinary Space(US), characterized by urinary tubules in the cortex area to Proximal convoluted tubule (PT which is lined with cubic cells, contain a central nuclei. The Distal convoluted tubule (DT) is a lined cubic cells with nuclei close to the apical tubules cavity and the cavity is broad and irregular (Figure 5).

(2) 1-day old of albino rat fetuses of mothers treated in the second week of gestation by Etoricoxib (Arcoxia)90mg:

When we examined the cross-sections of the kidney in the born rat at age (1 day) in albino rats and they were injected with their mothers inside thePeritoneal membrane in the second week of the pregnancy from the eighth day until the fourteenth day at a dose (1.6 mg / rat) of a drug Arcoxia, we have noticed the tissue sections of the kidneylooks like bean in compare to the control samples, surrounded from the outside a thin fibrous portfolio of connective tissue represents the capsule (Ca) which is characterized the kidney in two major structures: the outer renal cortex(C) and the inner renal medulla(M) also we have also noted the atrophy a tuft of capillaries in the glomerulus, contain dark nuclei and a hemorrhage within the glomerulusand show a defect in the structural organization and widening in the urinary spaces (US)and in other glomeruliwe have notedconglomerate in layer Visceral epithelia layer(VL) of Bowman's capsule (VL) with Pyknosis (PY), the presence of Hemorrhage blood vessels between urinary tubes thatlead to Proximal convoluted tubule (PT) and the Distal convoluted tubule (DT) In addition to analyzing the cytoplasm in Proximal convoluted tubule (PT) and the Distal convoluted tubule (DT), the separation of the basement membrane of some tubes (Figure 6).

(3)1-day old of albino rat fetuses of mothers treated in the second week of gestation by Parsley oil:

When we haveexamined the kidney tissue sections in the born mice at age (1 day) in albino rats, injected with their mothers inside the Peritoneal membrane in the second week of the pregnancy from the eighth day until the fourteenth day at a dose.

(0,5 mg/Rat) of a Parsley oil, we Found that most tissue sections did not occur has damage or disorders tissue both in the area of the cortex or Medulla throughout the experiment.

Are similar to the control samples of the kidney tissue sections of the kidney.

This age is similar to the form bean has the outer convex edge and inner concave edge and characterized into two areas the outer renal cortex and the inner renal medulla.

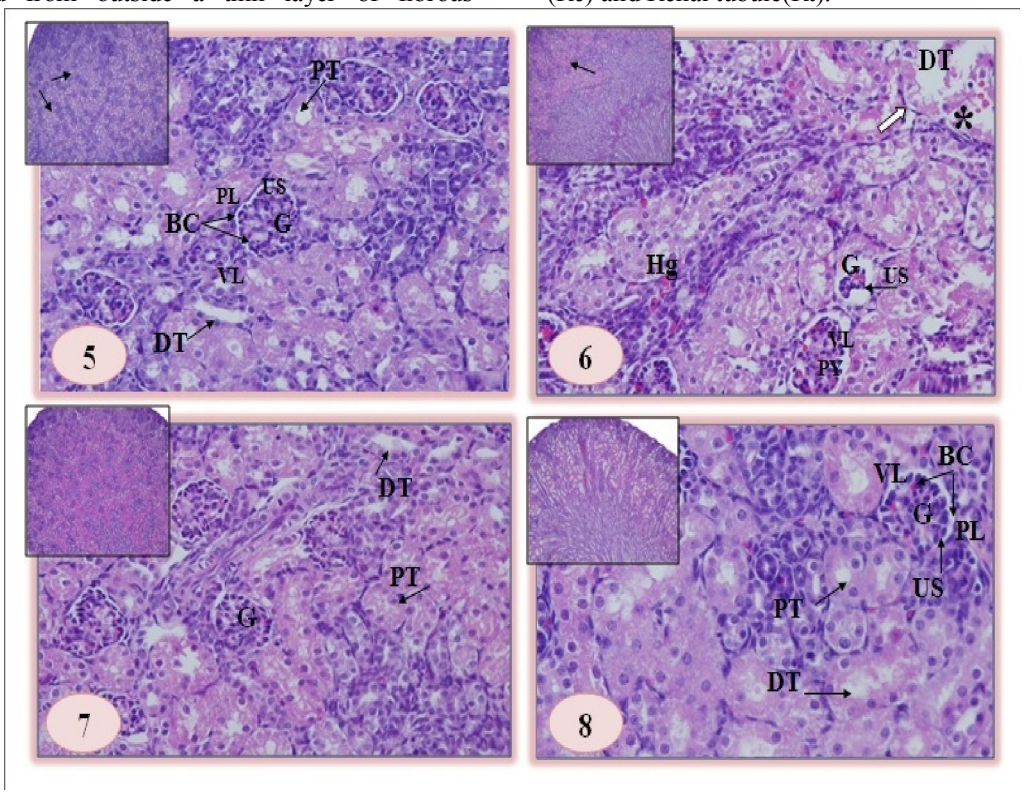
Also we have noted the kidney was surrounded from the outside a thin fibrous capsule of connective tissue represents the capsule (Ca), Cortex and medulla area contains many of Renal corpuscle (Rc) and Renal tubules (Rt).

Each renal corpuscle is composed of a glomerulus (G) Glomerulus is a tuft of capillaries based on the basement membrane of the glomeruli and Bowman's capsule which is composed of two layers: Parietal epithelia layer(PL) a layer of simple squamous epithelium lining the outer border of the corpuscle and the inner layer of Visceral epithelia layer (VL) which is lined with large circular cells and nuclei contain a large circular base pigment cells called Podocytes cell (PC) and is based on the outer surface of the capillaries of glomeruli. And there was a space between the parietal and visceral layers called Urinary Space(US), And characterized Renal tubule (Rt) in the cortex area toProximal convoluted tubule(PT) are lined by Cuboidal epithelial cells containing centralized nuclei and a narrow cavity, and the Distal convoluted tubule (DT) It is lined by cubic cells with apical nuclei near the cavity tubules, large and irregular cavity (Figure 7).

(4) 1-day old of albino rat fetuses of mothers treated in the second week of gestation by Arcoxia drug and Parsley oil:

When we examined the kidney tissue sections in the born rats at age (1 day), injected with mothers inside the Peritoneal membrane in the second week of the pregnancy from the eighth day until the fourteenth day at a dose (1.6mg / Rat) of a drug Arcoxia and (0.5 mg / Rat) of Parsley oil, we Found that the tissue sections of this group is similar to bean in outer shape and it'sthe outer convex edge and inner concave edge, at the center of the kidney found hilum which enters and out of the artery, vein and ureter characterized into

two areas: the outer renal cortex (C) and the inner renal medulla (M), It also we have noted, the kidney is surrounded from outside a thin layer of fibrous connective tissue forms the capsule (ca), the Cortex and spinal area contains many of the Renal corpuscle (Rc) and Renal tubule(Rt).



Form (5): cross-section to the image of the kidneys cortex born rats control the age of 1 - day (H. & E. × 40(
Form (6): cross-section to the image of the kidneys cortex born rats treated with a drug etoricoxib (Arcoxia) at the age of 1 - day shows atrophy of glomerular (G) with the breadth of urinary space (US), conglomerate layer internal visceral Bowmans capsule (VL) and atrophy of the nuclei (PY), hemorrhage between the tubules (Hg), hydrolyzed of Sytoblazm of distal tubules (*)
Form (7): cross-section to the image of the kidneys cortex born rats treated with parsley oil, age 1 - day and shows similarities structure normal glomeruli (G),proximal tubules (PT) and and distal tubules (DT)
Form (8): cross-section to the image of the kidneys cortex born rats treated with a drug etoricoxib (Arcoxia) and parsley oil age of 1 - day shows the installation similarities naturally most glomeruli (G) and two layers Parietal epithelia layer(PL) and internal Visceral epithelia layer (VL) component of the Bowmans capsule (BC), Proximal and distal convoluted tubule(PT) natural installed.

During treatment time, we noted the normal appearance of a tuft of capillaries (glomerulus) terms of shape, size and cellular components of cells comprising the Bowman's capsule (BC) Parietal epithelia layer(PL) and Visceral epithelia layer(VL) and shows a marked decrease in the breadth of Urinary Space(US). Also we noted the absence of hemorrhage was clear, which appeared in the group treated with Arcoxia drug, at the same time appeared the urinary tubules nearby normal appearance similar to control group is lined by cubic cells and contain a central nuclei and narrow cavity, As well as appeared the Distal convoluted tubule(DT) lined cubic cells with apical nuclei close to the tubules cavity and the cavity is broad and irregular (Fig. 8).

7- day old albino rats fetuses

1)7-day old control albino rats fetouses.

When the Histological examination by the light microscopy in the control kidney samples of rats at age (7 days) shows, the kidneys have characterized into two areas: the outer region of the kidney is Cortex (C) and the inner region of the kidney is medulla (M).

the kidney has surrounded from the outside a thin fibrous capsule of connective tissue represents the capsule (Ca), the Cortex region contains many of the Renal corpuscle (Rc) and Renal tubule(Rt), as it appears in the medulla region some (Rc)Renal corpuscle and Renal tubule(Rt) and clear pulpous radiation coming out towards the cortex area.

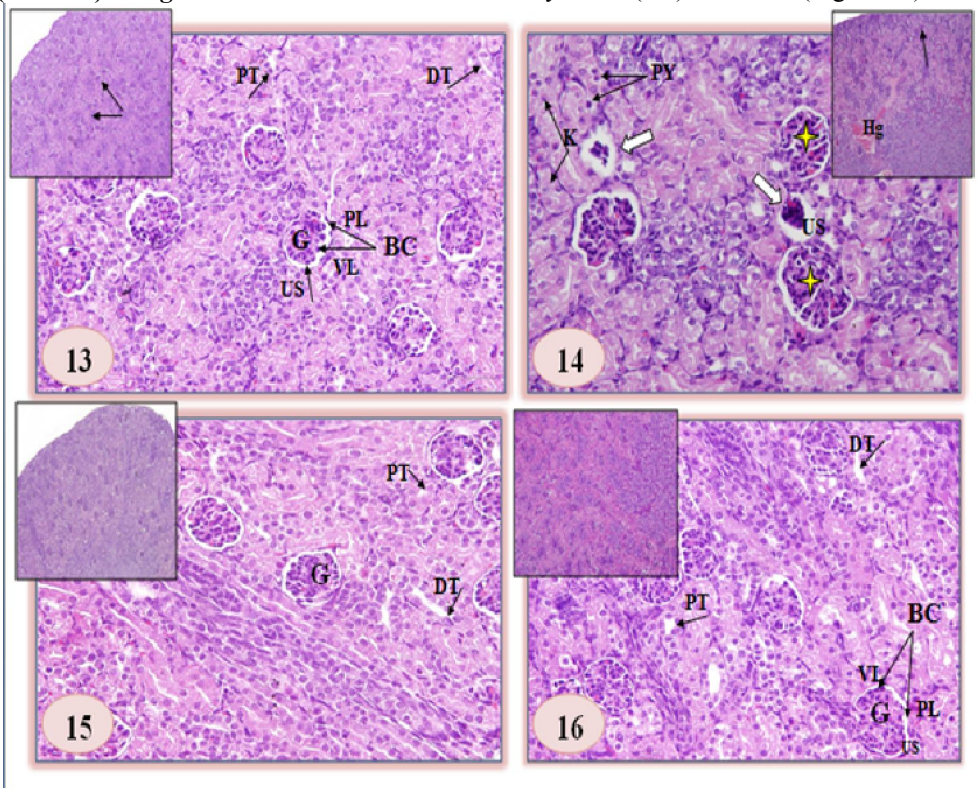
Each renal corpuscle is composed of a Glomerulus (G) is a tuft of capillaries based on basal membrane of glomerulus and Bowman's capsule Which consists of two layers: the outer layer is Parietal epithelial layer (PL) which is lined with a

simple squamous epithelium is a single layer of flat cells based on the membrane basal thin, the inner layer is Visceral epithelia layer (VL) which is lined with large circular cells and containing nuclei larger circular base pigment cells called Podocytes cell (PC) and is based on the outer surface of the capillaries of glomeruli.

There is a space between the parietal and visceral layers called Urinary Space (US), and characterized the Renal tubule(Rt) in the cortex area to Proximal convoluted tubule (PT) which is lined by cubic cells and contain a central nuclei and the cavity is narrow and Distal convoluted tubule (DT) which is lined by cubic cells with nuclei apical near the cavity tubules and the cavity is broad and irregular (Figure 13).

(2) 7-day old of albino rat fetuses of mothers treated in the second week of gestation by Etoricoxib (Arcoxia) 90mg:

As in the previous age when we examined the kidney at born rat at age (7 days), injected their mothers within the Peritoneal membrane in the second week of the pregnancy from the eighth day until the fourteenth day at a dose (1.6mg / rat) of a drug Arcoxia, We have noted that the kidney is surrounded from the outside a thick fibrous portfolio of connective tissue represents the capsule (Ca) and it is characterized into two areas: the outer region of the kidney is Cortex (C) and the inner region of the kidney is medulla (M). And also notes to find Hemorrhage (Hg) and severe atrophy of the tuft of capillaries of the glomeruli, resulting in widening the Urinary Space (US), showed as residuals unclear where old cells layer, as occurred fragmenationof the tuft of capillaries other glomeruli and The emergence of nuclear is Karyorrhexis (K) for some nuclei and;; Pyknosis (PY) for others (Figure 14).



Form (13): micrograph enlarged cross-section in the cortex of the kidneys born rats control the age of 7 - (H. & E. × 40)

Form (14): micrograph enlarged cross-section in the cortex of the kidneys born rats treated with a drug etoricoxib (Arcoxia) age 7 - day shows severe atrophy of the glomeruli () with the breadth of urinary space (US), note Fragmentation of the tufts some of the glomeruli (), a pyknosis (PY) and karyolysis(K). (H.& E. × 40)

Form (15): micrograph enlarged cross-section in the cortex of the kidneys born rats treated with parsley oil age 7 - day shows similarities to normal glomeruli similar to the control samples (G) and proximal tubules (PT) and distal tubules (DT). (H. & E. × 40)

Form (16): micrograph enlarged cross-section in the cortex of the kidneys born rats treated with a drug etoricoxib (Arcoxia) and parsley oil age 7 - day shows the installation similarities normal glomeruli (G) and look glomerulus surrounded Bowman capsule(BC), consisting of two layers Parietal epithelia layer(PL) and internal Visceral epithelia layer (VL) and separated by a urinary space (US), proximal tubules (PT) and distal tubules (DT) is similar to the installation of the control samples. (H. & E. × 40)

(3) 7-day old of albino rat fetuses of mothers treated in the second week of gestation by Parsley oil:

When we have examined the kidneytissue sections at born mice at age (7 days) and that their mothers were injected into the peritoneal membrane in the second week from the eighth day until fourteenth day dose (0, 5mg/Rat) of parsley oil, we Found that most sectors did not occur has damage or histopathological disorders in the region of the cortex for the duration of the experiment, Where were similar to tissue sections of the kidney in the samples control and the kidney is characterized into two areas: the outer region of the kidney is Cortex (C) and the inner region of the kidney is medulla (M), and also note the kidney is surrounded from the outside a thick fibrous portfolio of connective tissue represents the capsule (Ca), the Cortex region contains many of the Renal corpuscle (Rc) and Renal tubule(Rt). Each renal corpuscle is composed of a Glomerulus (G) is a tuft of capillaries based on basal membrane of glomerulus and Bowman's capsule Which consists of two layers: the outer layer is Parietal epithelial layer (PL) which is lined with a simple squamous epithelium is a single layer of flat cells based on the membrane basal thin, the inner layer is Visceral epithelia layer (VL) which is lined with large circular cells and containing nuclei larger circular base pigment cells called Podocytes cell (PC) and is based on the outer surface of the capillaries of glomeruli.

There is a space between the parietal and visceral layers called Urinary Space (US), and characterized the Renal tubule(Rt) in the cortex area to Proximal convoluted tubule (PT) which is lined by cubic cells and contain a central nuclei and the cavity is narrow and Distal convoluted tubule (DT) which is lined by cubic cells with nuclei apical near the cavity tubes and the cavity is broad and irregular (Figure 15).

(4) 7-day old of albino rat fetuses of mothers treated in the second week of gestation by Arcoxia drug and Parsley oil:

When we have examined the kidney cross-sections at the born mice at age (7 days), injected mothers within the peritoneum in the second week of pregnancy from the eighth day until the fourteenth day at a dose (1.6mg / Rat) of a drug Arcoxia and (0.5 mg / Rat) parsley oil, We find that the kidney is surrounded from the outside a thick fibrous portfolio of connective tissue represents the capsule (Ca) and it is characterized into two areas: the outer region of the kidney is Cortex (C) and the inner region of the kidney is medulla (M). The Cortex and medulla area contains many of the Renal corpuscle (Rc) and Renal tubule(Rt) and depending on the duration of treatment it notes normal appearance of the Renal corpuscle and a tuft of capillaries (glomerulus) and components of cellular squamous Parietal epithelial layer (PL) and cells of visceral internal (VL) component of the Bowman capsule (BC), and it shows a marked decrease in the extent of the Urinary Space (US), distal convoluted tubule and prximal look similar in composition to the control samples (Figure 16).

15-day old albino rats fetouses

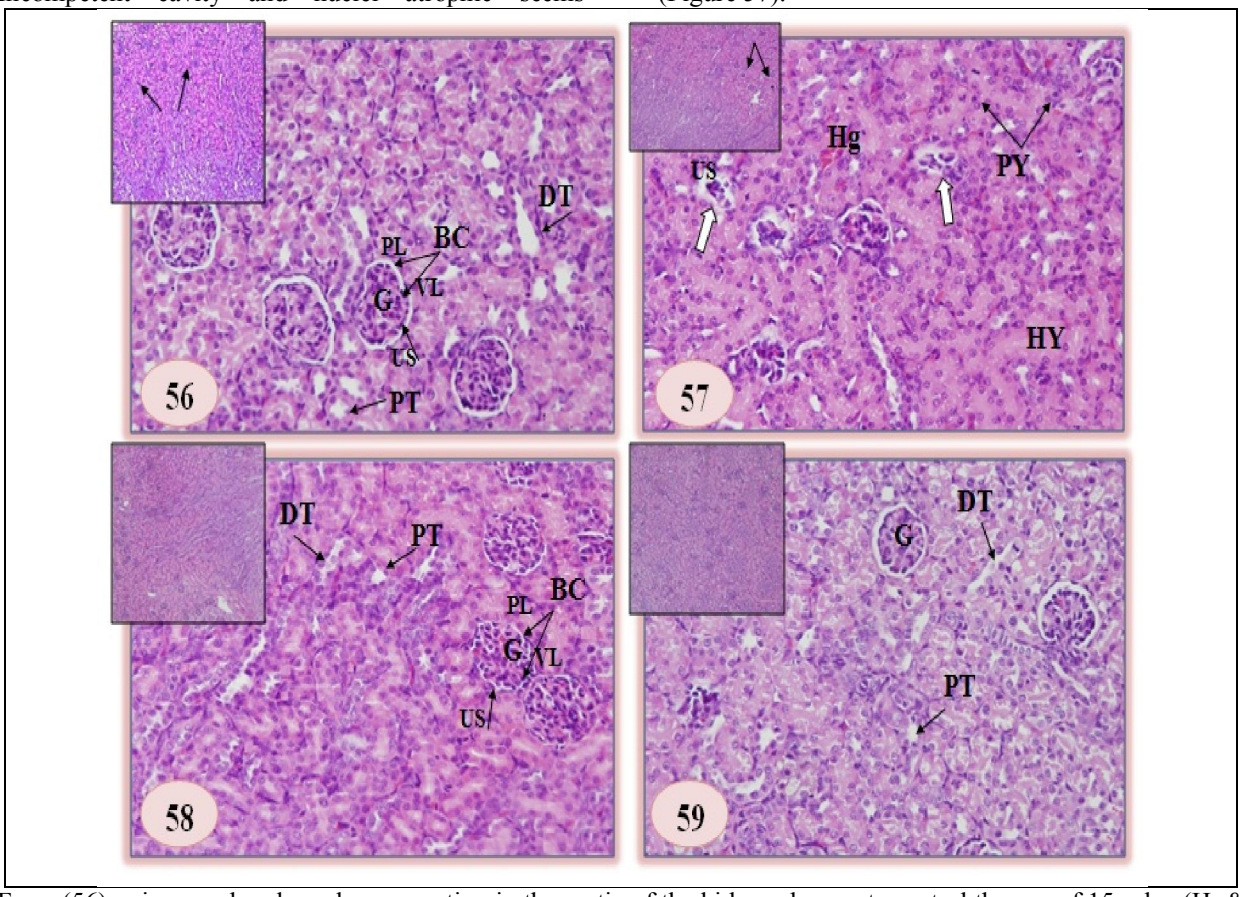
(1)15-day old control albino rats fetouses

When the sampling officer Omar (15 day); the kidney found surrounded by foreign portfolio thin connective Capsule (Ca), and the kidney is divided into two areas: the outer region is the cortex Cortex (C) and the inner Medulla (M) cord and cortex area contains many (Rc) Renal corpuscle and a Renal tubule urinary tubules (Rt) as it appears in the region of medulla some Renal corpuscle and urinary tubules. each renal corpuscle is composed of a glomerulus (G) Glomerulus in this age, large size compared to the previous age and each glomerulus is a tuft of capillaries based on basal membrane of glomerulus and Bowmans Capsule (BC) which is composed of two layers: the outer layer of wall saddles Parietal layer epithelia (PL) and is lined with squamous cells flat simple nuclei based on basal membrane thin thin, inner layer visceral epithelia Visceral layer (VL) and is lined with large circular cells containing nuclei larger circular base dye called old cells and anchored above the outer surface of the capillaries glomerulus. There is a space between the parietal and visceral layers called Urinary Space (US) or Contracture and urinary tubules feature in the area of the cortex Proximal convoluted tubule close ((PT, are lined by cubic cells containing nuclei central cavity and tight and Distal convoluted tubule (DT) and is lined by cubic cells with apical nuclei near the cavity tubes, large and irregular cavity (fig. 56).

(2) 15 -day old of albino rat fetouses of mothers treated in the second week of gestation by Etoricoxib(Arcoxia)90mg:

When you examine the cross sections for the kidney in native rats (15 days) and that their mothers were injected into the peritoneal membrane in the second week of the eighth day until fourteenth day dose (1.6 mg/rat) of arcoxia; as in other groups Note that the kidney is surrounded by thick fibrous portfolio of connective tissue resembles the cover of kidney (Ca) and featuring two kidney: Cortex (C) and Medulla (M) show the renal corpuscle and urinary tubules in the region of the cortex as in ages past treatment with medication in this age also urinary tubules natural form is irregular in shape and noted a change in the form of urinary space where the outer casing has a thick and curvy and is glued to the inside cover in some places entire imbalance in Notes form and limits of glomeruli are atrophic and decomposed, and urinary tubules to urinary tubes proximal and

distal tubules, some tubules, both proximal and distal Incompetent cavity and nuclei atrophic seems hydrolysis, and congestion appears in the interstitial (Figure 57).



Form (56): micrograph enlarged cross-section in the cortix of the kidneys born rats control the age of 15 - day (H. & E. × 40)

Form (57): micrograph glass sector accidental in all my born in rats treated with a drug Atorrecoxab (Arcoxia) age of 15 - day notes complete disruption in the form of limits glomeruli Vizaraldmor some glomeruli () and uncle regularity polyurethane vacuum form (US), nuclear atrophy (PY) and hydrolysis (HY) in the urinary tube, notes hemorrhage in the tissue interface between the tubules (Hg). (H. & E. × 40)

Form (58): micrograph glass sector accidental in all my born rats treated with parsley oil, the age of 15 - day and shows the installation similarities normal glomeruli (G) show glomerulus surrounded portfolio Bowman (the BC), consisting of two layers wall (PL), which is lined with cells squamous inner layer visceral (VL) lining cells of old and separated by a polyurethane vacuum (US) show wrapped proximal tubules (PT) which is lined cubic cells and contain central cores and cavity narrow and coiled tubing remote (DT) which is lined cubic cells with nuclei apical close cavity tubes and cavitation widely. (H. & E. × 40)

Form (59): micrograph glass sector accidental in all my born in rats treated with a drug Atorrecoxab (Arcoxia) and oil parsley age of 15 - the day most of the glomeruli are shown in Figure normal size have (G) also notes the natural appearance of the pipes wrapped nearby (PT) and remote (DT) and irregular shaped polyurethane vacuum (US). (H. & E. × 40)

(3) 15-day old of albino rat fetouses of mothers treated in the second week of gestation by Parsley oil:

When you examine the cross sections for the kidney in native rats (15 days) and that their mothers were injected into the peritoneal membrane in the second week of the eighth day until fourteenth day dose (0, 5mg/Rat) of parsley oil found that most sectors as in previous ages did not occur has damage or histopathological disorders in the region of the cortex for the duration of the experiment where were similar to textile sectors of the kidney in the control samples were characterized by the kidney to two: External area is Cortex (C) and internal Medulla (M). also notes that the kidney is surrounded by overseas portfolio thin fibrous connective tissue Capsule of

fibrous casing represent kidney (Ca) and the cortex area contains many (Rc) Renal corpuscle and a Renal tubule (Rt) and renal corpuscle of each glomerulus (G) Glomerulus is a capillary tuft of basal membrane-based of glomerulus. Bowmans Capsule (BC) which is composed of two layers: Outer layer called Parietal layer epithelia (PL).

It is lined by squamous cells flat simple nuclei based on basal membrane thin thin, inner layer visceral epithelia Visceral layer (VL) and is lined with large circular cells containing nuclei larger circular base dye called podocyte and anchored above the outer surface of the capillaries glomerulus. There is a space between the parietal and visceral layers called these Urinary Space (US) and urinary tubules feature in the area of the cortex to coiled tubing Proximal convoluted tubule close ((PT, are lined by cubic cells containing nuclei central cavity and tight and coiled tubing Distal convoluted tubule remote (DT) and is lined by cubic cells with apical nuclei near the cavity tubes, large and irregular cavity (fig. 58).

(4) 15-day old of albino rat fetouses of mothers treated in the second week of gestation by Arcoxia drug and Parsley oil:

When you examine the cross sections for the kidney in native rats (15 days) and that their mothers were injected into the peritoneal membrane in the second week of the eighth day until fourteenth day dose (1.6 mg/Rat) of arcoxia and (0, 5mg/Rat) of parsley oil; we find that kidney is surrounded outside by a thin fibrous portfolio of connective tissue resembles the cover of kidney (Ca) and featured two: External area is the cortex (C) and the cotex and Medulla (M) contains many renal corpuscle (Rc) and urinary tubules (Rt) in the group treated with the drug and oil together notes the emergence of some urinary tubules is the shape and size of the model as well as a tuft of capillaries (glomerulus) and the parietal and visceral Bowman her layers and shows the urinary space (US) and decreasing in size after that was enough in the group treated with the drug seems to be improving as well as clear in form and composition of urinary tubules, both proximal and distal (fig. 59).

30- day old albino rats fetouses

(1) 30-day old control albino rats fetouses

When the sampling officer age (30 days) of native rats; he found that kidney as in ages past, surrounded by foreign portfolio thin connective Capsule (Ca), and is divided into two areas: external is the cortex Cortex (C) and the inner Medulla (M) cortex area contains many (Rc) Renal corpuscle and a Renal tubule (Rt) and renal corpuscle of each glomerulus (G) Glomerulus and the glomeruli appear larger than previous ages (1, 7, 15) and every glomerulure is a tuft of capillaries based on basal membrane glomerulure and Bowmans Capsule (BC) which is composed of two layers: the outer layer of Parietal layer epithelia (PL) and is lined with squamous cells flat simple nuclei based on basal membrane thin. And visceral epithelia Visceral inner layer (VL) and is lined with large circular cells containing nuclei larger circular base dye called podocytes and anchored above the outer surface of the capillaries glomerulure. There is a space between the parietal and visceral layers called these Urinary Space (US) or Contracture and urinary tubules feature in the area of the cortex to coiled tubing Proximal convoluted tubule ((PT, are lined by cubic cells containing nuclei central cavity and tight and coiled tubing Distal convoluted tubule remote (DT) and is lined by cubic cells with apical nuclei near the cavity tubules, large and irregular cavity (fig. 64).

(2) 30-day old of albino rat fetouses of mothers treated in the second week of gestation by Etoricoxib (Arcoxia) 90mg:

When you examine the cross sections for the kidney in native rats (30 days) and that parents were injected into the peritoneal membrane in the second week of the eighth day until the fourteenth day of the dose amount (1.6 mg/rat) of arcoxia; note that the kidney is surrounded by thick fibrous portfolio of connective tissue resembles the cover of kidney (Ca) and featuring kidney to two areas: cortex (C) and Medulla (M) show the corpuscule and urinary tubules in the region of the cortex and the medulla observed atrophy urinary tubules having cavities And blood vessels in the area between the cortex and the medulla show some of the glomeruli in unnaturally where Fragmentation occurs and severe Atrophy, Acute degeneration appears as a solid mass of cells of the atrophic and analyseLysis the glomeruli resulting in loss of urinary corpuscle form spherical globules and also irregular in shape of urinary space, and urinary tubules happened some nuclei nuclear burst tubules inside the cavity along with laceration of cytoplasm and Pyknotic atrophy of the nuclei of many cells lining tubules(fig. 65).

(3) 30-day old of albino rat fetouses of mothers treated in the second week of gestation by Parsley oil:

When you examine the cross sections for the kidney in native rats (30 days) and that parents were injected into the peritoneal membrane in the second week of the eighth day until fourteenth day dose (0, 5mg/Rat) of parsley oil found that most sectors as in previous ages didn't occur to her or ocular tissue throughout the experiment where were similar to textile sectors of the kidney in the control samples were characterized by the kidney to two: External area is the cortex Cortex (C) and internal Medulla (M); Note that the kidney is surrounded by overseas portfolio thin fibrous connective tissue Capsule of

fibrous casing represent kidney (Ca) and cortex area contains many renal corpuscle (Rc) Renal corpuscle and a Renal tubule urinary tubules (Rt) and each renal corpuscle of the glomerulus (G) Glomerulus is a capillary tuft of basal membrane-based the glomerulus and Bowmans Capsule (BC) which is composed of two layers: External convex wall layer Parietal layer epithelia (PL) and is lined with squamous cells flat simple nuclei based on basal membrane thin thin, inner layer visceral epithelia Visceral layer (VL) and is lined with large circular cells containing nuclei larger circular base dye called podocyte and anchored above the outer surface of the capillaries glomerulus. There is a space between the parietal and visceral layers called these Urinary Space (US) and urinary tubules feature in the area of the cortex to coiled tubing Proximal convoluted tubule ((PT, are lined by cubic cells containing nuclei central cavity and tight and coiled tubing Distal convoluted tubule (DT) and is lined by cubic cells with apical nuclei near the cavity tubules, large and irregular cavity (fig. 66).

(4) 30-day old of albino rat fetouses of mothers treated in the second week of gestation by Arcoxia drug and Parsley oil:

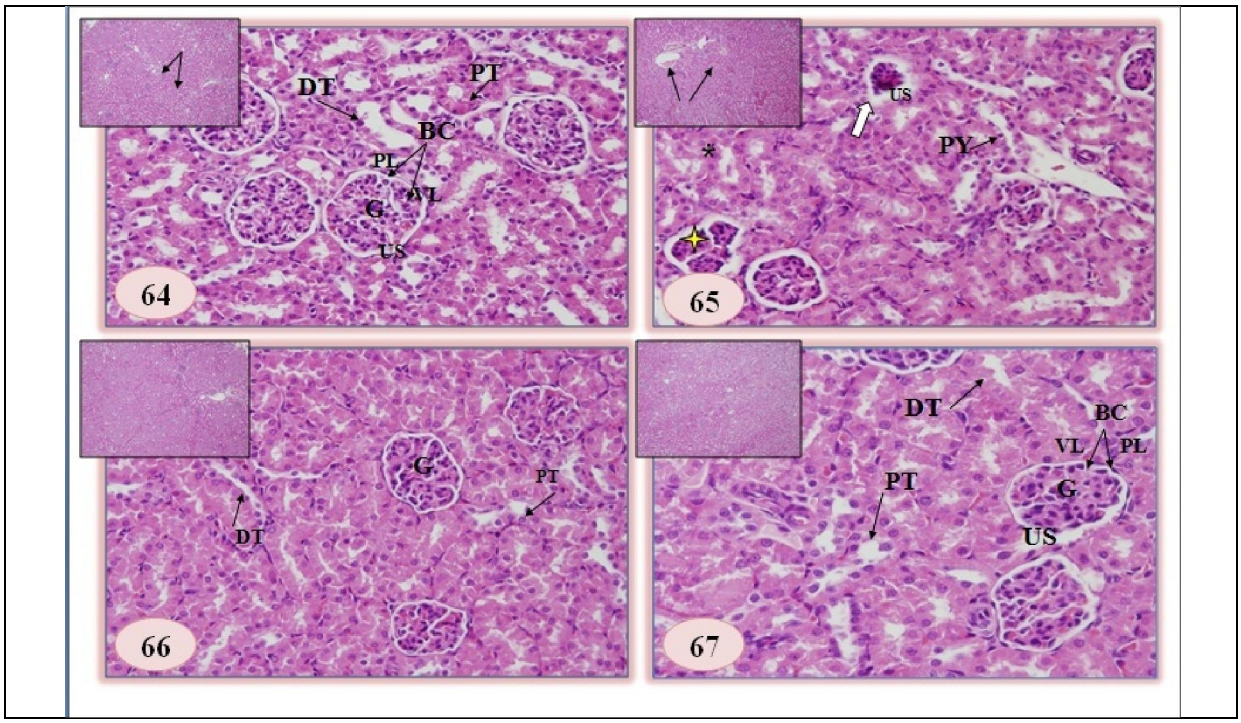
When you examine the cross sections for the kidney in native rats (30 days) and that parents were injected into the peritoneal membrane in the second week of the eighth day until fourteenth day dose (1.6 mg/Rat) of arcoxia and (0, 5mg/Rat) of parsley oil; we find that kidney is surrounded outside by a thin fibrous portfolio of connective tissue resembles the cover of kidney (Ca) and featured two: External area is the cortex (C) and the inner Medulla (M) and the cortix area and medulla contains on many urinary corpuscle (Rc) and urinary tubules (Rt) and in this group renal corpuscle and tubules similarities naturally as in control samples show a tuft of capillaries (glomeruli) surrounded by Bowman's purse and separated urinary space between the parietal layer and visceral and show Proximal convoluted tubule (PT-lined by cubic cells containing nuclei central cavity and tight and coiled tubing Distal convoluted tubule (DT) It is lined by cubic cells with apical nuclei near the cavity tubules, large and irregular cavity (fig. 67).

I. study the natural growth of the kidney in native rats (control sample): in the current search radar for examination said shell was born in rats of officer Kidney (1-7) that:

kidney texture was similar to bean also appeared in total control at these ages groups surrounded by fibrous connective tissue wallet cover represents the kidney as it marked two cortex and Medulla region interior and cortex contains many renal corpuscle; composed of glomerulus and Bowman's capsule, which is composed of two layers: the outer layer is convex wall lined by squamous cells flat simple nuclei based on basal membrane thin thin, a visceral inner layer is lined Large circular cells containing nuclei larger circular base dye called podocytes and anchored above the outer surface of the capillaries glomerulus. There is a space between the parietal and visceral layers called urinary space are also characterized by urinary tubules to proximal convoluted tubules and are lined by cubic cells containing nuclei central cavity and tight and distal convoluted tubules and is lined by cubic cells with apical nuclei near the tubule cavity and wide cavity.

This was in accordance with what was said (**Ahmed et al., 1994**) kidney in the white mouse 3 days surrounded by fibrous connective tissue wallet and distinguishable to the cortex and the medulla, which extends from radial columns and veneer can be divided into lobules each beam and the cortex by nephrons and tubules both proximal and distal, collecting tubules, malpighian corpuscles, consisting of a portfolio of two walls that surround Bowman corpuscle.

And with what (**Sadek et al., 1993**) and (**Ahmed et al., 1994**) to describe kidney in white rats aged 10, 7 day in age (7 days) was a kidney composed also of cortex and medulla contains many (Renal corpusles) and renal tubules described the (Cortial rays) as containing collecting tubules with few connective. each renal corpuscle contains (Glomerulus) and Bowman capsule consisting of parietal layer and visceral layer and between their urinary space but glomerulus is Contains a tuft of capillaries with connective tissue. The renal tubules are composed of two types of tubules are Proximal convoluted tubule and is composed of cells of the pan base kernel short position within the cytoplasm and Pro-tubule cavity surface has a surface of brush border wrapped away small cubical cells lined and circular nucleus and cytoplasm, And age (10 days) noted that the kidney larger and more developed where viewed Bowman capsule impenetrable vascular hand by artery to the glomerulus is the capsule consisting of an outer wall and inner between walls there is aurinary space. Proximal convoluted tubule (upper) consisting of a single layer of cells of (Low columnar) low circular nuclei contains about 3-5 cells around his tight cavity edge brush border either distal convoluted tubule contain 6-8 cubic cells on large cavity and can distinguish these tubules From Henley and collecting tubule.



Form (64): micrograph enlarged cross-section in the crust of the kidneys born rats control the age of 30 - day. (H. & E. × 40)

Form (65): micrograph glass sector accidental in all my born in rats treated with a drug Atorrecoxab (Arcoxia) age of 30 - day notes atrophy of some glomeruli () showed the solid bloc of atrophic cells, irregular shape of the vacuum polycarbonate (US), segmentation of the lock of the blood capillaries the glomerulus (), a nuclear atrophy (PY) and laceration Sitoblazmi (*) (H. & E. × 40)

Form (66): micrograph glass sector accidental in all my born rats treated with parsley age of oil, 30 - day and shows the installation similarities normal glomeruli and ipsilateral samples control (G) and nearby coiled tubing (PT) and remote (DT). (H. & E. × 40)

Form (67): micrograph glass sector accidental in all my born in rats treated with a drug Atorrecoxab (Arcoxia) and oil parsley age of 30 - the day most of the glomeruli are shown in Figure normal size have (G), as well as classes consisting of portfolio Bowman (the BC) wall (PL) and visceral (VL) and the emergence of natural coiled tubing nearby (PT) and remote (DT). (H. & E. × 40)

We agreed opinion (**Mcreddie et al., 1995)** said that in the first week after birth in mouse consisting of cortex containing nephron at various stages of development ranging from non-distinct units (units that contain glomeruli) units contain bristles glomerulus (advanced stage) which exist in the cortix and then the units contain fully developed glomeruli in the area near the medulla.

Once in lifetime (15) on the observed changes in the kidney where the renal corpuscle become larger and increased density of arterial tuft and cortex area contains many of these renal corpuscle and urinary tubules and each renal corpuscle of the glomerulus is a capillary tuft of basal membrane-based glomerulus and Bowman capsule consisting of two layers: the outer layer convex wall and visceral inner layer and separated urinary space and urinary tubules Characterized in the cortex area to proximal and distal convoluted tubules.

Agreed with us (**Sadek et al., 1993**) and (**Ahmed et al., 1994**), where he stated that when the birth age (14 days) after delivery have changed renal corpuscle become larger and became elliptical form with increased arterial tuft density; proximal convoluted tubules became lined with pyramid-shaped cells contain a nucleus and cytoplasm of some cavities and their cells edge have (Brush Border) either distal convoluted tubules consisting of cubic cells, circular kernel mode.

It has been reported (**Pearse, 1995**; **Robbins, 1995**) that the cortex contains the Renal corpuscles or (Malpighian corpuscles) consisting of glomeruli and Bowman's capsule with Urinary space separates the visceral epithelial layer and the Parietal epithelial layer.

This is also supported (**Akil et al., 2004**), where he found that in mice when at (18 day) was surrounded by the capsule underneath the Renal

corpuscles or at different stages of development and nephron components appear on the letter (S). glomerulosa at advanced stages of growth and show the component cells of the tissue interface.

And in the age where age (30) on the renal and the renal corpuscles were large in size compared to previous ages (1, 7, 15) on each renal corpuscle is composed of a glomerulus and each glomerulus is a tuft of capillaries based on basal membrane of glomerulus and Bowman capsule consisting of two layers: the outer layer and visceral inner layer there is space between the parietal and visceral layers called urinary space and urinary tubules feature in the cortex area to Proximal convoluted tubule and are lined by cubic cells contain the Central nuclei and tight cavity and distal convoluted tubule is lined by cubic cells with apical nuclei near the cavity tubules, large and irregular cavity.

And he agreed with us on this (**Sadek et al., 1993**; **Ahmed et al.,1994**; **Shaker and EL-Baz, 2001**), described the kidney in white rats at age 8 weeks it is surrounded by fibrous connective tissue capsule and characteristic to the cortex and medulla, divided by the renal's rays to tobules. All tobule containing malpighian corpuscle consisting of Bowman's capsule that takes glomerulus by two walls parietal and visceral. as well as containing proximal tubules anear Amadiyah and cell nucleus and cytoplasm that contains pockets and edge of the cell to the lumen be brush border. distal tubules contains cubic cells with circular nucleus cytoplasm of these cells either, it contains no grains and cell surface facing the cavity is not has brush border. There are also collecting tubules, Henley tubule in medulla of kidney.

And we also (**Gartner and Hiatt, 2006**) where he describes the natural composition in kidney of the adult male mouse that portfolio consists of dense kolaginihfibres and fibroblasts appear sometimes and some of cardiovascular. The kidney consists of the cortex and consists of parts of nephron and collecting tubules bundled pipe kinks form not line up beside the cardiovascular fabric interface consists part crust of pellets wrapped in renal corpuscle and transverse segments of tobule twisted near and far and dense patch of mote pipe ball consists of urinary cells almiznshimih and outer layer squamous and visceral layer of cells, which have a whole purse Bowman there capillaries or so-called balkebibh syndrome with Bowman portfolio related to outgoing artery between class Foreign and visceral space called the Bowman space related to the renal tubules.

I mentioned (**Ali and Taha, 2008**) textile sections of Kelly white rats showed containment shell area renal pellets consisting of Bowman's capsule with outer layer of simple squamous parietal and visceral internal layer surrounded by a tuft of capillaries (glomerulus) and cortex area also on coiled tubing near and far.

As confirmed by the results of a thorough examination of rind CLE native rats officer age (7): histological kidney in animals the officer corresponds installed in other mammals (**Ham and Cormack**, 1979; **Junqueira et al., 1998**).

And between (**Cross and Mercer, 1999**), the activity and vitality of the transport is the highest possible in the nearby region of tubules and crust less than in nearby tubules in the bone marrow. And female (**Young et al., 2000**) that the thickets are surrounded by a thick cover of glycocalyx where it provides chemical and physical protection for the thickets.

II. the influence of the drug etoricoxib (arcoxia) on the kidney: histological examination indicated sectors crust CLE bjerager rats treated with arcpxia estate to different ages (1, 7, 15, 30) on the emergence of a clear delay in growth retardation of growth in the total fabric: age (1 to 15) represents a delay in growth in small size renal pellets and irregular shape and appearance of atrophic kidney pellets or shrunken or overgrown and the inner layer of the Bowman's portfolio in addition to cavity does not appear in some renal tubules.

And he agreed with us on these results (**Stevens and Lowe, 1997**) where interpreted the contraction and atrophy in the glomeruli that drug concentration in the blood is affected by the constriction of capillaries, leading to a decrease in glomerular filtration of the property and thus reduces the impact of property and protect the tubules.

We also supported (**Abdel-Kader et al., 1998**) had indicated the presence of atrophy in glomeruli and rupture in the parietal layer of the Bowman's portfolio in the rat treatment indomethacin.

As agreed with us (**Mahmoud et al., 2010**) in a study to clarify and compare the impact of giving almiloksikam (selective llsikloaoksginiz inhibitor-2) and alkitobrovin) anti-inflammatory non-traditional astroidi) long on the installation of the College and the mucosa lining of the stomach in adult male rats, white has been injected rats with alkitobrovin treatment with dose (1 mg/kg) daily by mouth using gastric tube for ten weeks and the rats treated with meloxicam drug, injected a dose (2, Mg/kg (oral daily for ten weeks also and when radar screening of animals treated group BA lkitobrovin appeared in the renal glomeruli noticeable shrinkage, measurement showed renal pellets in this group lack of statistically significant compared to the control group and found many dilated renal cannulae and promiscuous fabric lined and occurred during the penny for cells with fibrous tissue examination revealed the mucosa lining of stomach

damage to epithelial cells to the surface to form multiple ulcers as well as widening the basal parts of the infectious and glands in the treatment group balmiloksikam (it works on inhibition of alsikloaoksigniz-2 (found a small contraction in the renal glomeruli and either the lining of the stomach was found by Ulcers in different parts of the surface of the mucous membrane.

In the age when the 30 days where the effect more obvious estate appeared late growth in the small size renal pellets and irregular shape and appearance of atrophic kidney pellets, emerged as a solid block, and some of them are fragmented and the inner layer of the Bowman's capsule.

And agree with us on that (**Adams et al., 1986**) when he scored the damage occurred on the outskirts of the glomerulus in patients taking ketoprofen.

And said (**Marasco et al., 1987**) that the anti inflammation, ibuprofen cause albuminuria (Paul albumin) and hyper with almisngim cells are spherical llkbibeh of urinary tubes leakage for most cells, monocytes and the just to bore tubes.

has confirmed (**Segasothy et al., 1994**)) malfunction in kidney function as a result of the use of non-astroideh anti-inflammatory to chronic periods.

This is also supported (**Abdel-Kader et al., 1998**) by stating that the indomethacin-treated mice led to the atrophy of the glomeruli and rupture in the parietal layer of Bowman's capsule.

In this study, featured many changes in tissue cells degradability kidney was swelling, oedema and congestion and haemorrhage, cellular necrosis, cellular death cell death. Forms of nuclear decay appeared to turn karyrrhexis and nuclear pyknosis and nuclear degradation karyolysis.

In age (1 to 15) on the most important aspects in a hash of some Tufts glomeruli and clumping of visceral layer of Bowman's purse and Interior widening polyurethane vacuum plus hemorrhage occurs in the Web interface and the decomposition of aqueous cytoplasm to laceration and some urinary tubes and basal membrane separation of some the atrophy and disintegrate.

These changes came the approval for the grandfather many scientists who have studied the impact of non-astroideh anti-inflammatory drugs on many tissues in different animals:

You may notice (**Abdel-Gawad, 1991**; **D'Agati, 1996**) necrosis and stiffness in the glomeruli in mice after being injected with white contrary non-pneumonia astroideh (aspirin walbibrovin) over the long term.

We agreed (**Blackwell et al., 1995**) where it was found that real estate (nabomiton) is a non-astroidi anti-inflammatory caused damage of glomerolus tubules and swelling (edema).

He noted (**Whelton., 1999**; **Wood et al., 2013**) to anti-inflammatory non-NSAID) astroideh) caused necrosis (necrosis) of the renal tubules.

The (**Hickey et al., 2001**; **Aydin, 2003**) double necrosis in Talaeea many urinary tubes close with Interstitial pneumonia (inflammation of the kidney) Glomerular in rabbits and mice (**Iskandar et al., 2004**) and mice (**EL-Hammay et al., 2004**) injected by drug diclofenac sodium.

Also notice (**Triebskorn et al., 2004**; **Hussain et al, 2008**) appearance changes in liver and kidney tissue in trout and broiler birds baldiklovinak treatment.

So stressed (**Modi et al., 2012**) the textile sections of kidney treatment drug piroxicam showed some inflammation and cellular record contraction in glomeruli, leading to the vastness of the urinary area and edema and gaps in tubular cells.

He said (**El-Maddawy and El-Ashmawy, 2013**) histological examinations showed that the risk of injury increases with increasing the dose of the drug when rats injected with a dose of (13.5 mg/kg) of diclofenac sodium for between 2-4 weeks appeared watery and wenkrsh gaps analyses in mice liver tissue infiltration of cells in single core processor in addition to the aforementioned property causes changes in blood and tissue CLE male mice.

Found (**Ali et al., 2014**) therapywith naproxin which is non-stroidal anti-inflammatory) high-dose (20 mg/kg) in rats white led to blistering in the small intestine and an increase in the length of the microvilli with the presence of inflammatory cells in the custom plate as there were gaps formed in the cells of the mucous lining of the stomach and inflammatory cells in serum with a dogmatic part FCV in and maximum muscle layer external to the stomach.

In the age when (30) on the main aspects of decomposition in the irregular shape of the vacuum polycarbonate or Contracture and fragmentation of strands of capillaries and blood congestion in the intercellular connective tissue interface plus some nuclei nuclear burst pipes into the lumen and the nuclear and cytoplasm laceration atrophy.

These changes came the approval for the grandfather many scientists who have studied the effects of non-astroidet anti-inflammatory drugs on many tissues in different animals:

In human note (**Brezin et al, 1979**; **Bender et al, 1984**) looking glass and intransigent glomeroulali in patients using anti inflammatory non-astroidal (vinobrovine).

Added (**Abdel-Gawad, 1991**; **D'Agati, 1996**) injected mice with white TTC (piproven and aspirin) led to long to necrosis and stiffness in the glomeruli.

And agree with us too (**El-Banhawy et al., 1994**), said that the injection of anti inflammation

(indomethacin) in rats for three weeks, causing congestion of the capillaries and the disappearance of the void.

And note (**Triebskorn et al., 2004**; **Hussain et al, 2008**) changes in liver and kidney tissue in trout and broiler birds which treatment by diclofinac.

The findings of the study (**Chang et al., 2005**) indicates that non-steroidal anti-inflammatory drugs have impacted significantly on the cell cycle in G (0)/G (1) in native rats as they cause cellular toxicity and serve to stimulate programmed death in osteoblasts and this in turn contributes to suppress bone formation process.

As tell (**Chang et al., 2006**) NSAIDs including celecoxib works on induction of cell death in cultured osteoblasts from rat embryos.

As between (**Khoshvakhti et al., 2015**) when scanning optical microscope sore in vascular contraction on vacuum Bowman in addition to deterioration in nephrons including warp glomeruli and urinary tubes and increased connective tissue in female pregnant rats and holistic treatment of sodium diclofinac.

And proven collection of scientists (**Finkelstein et al., 1982**; **Bender et al., 1984**; **Olsen et al., 1986**) that most NSAIDs cause acute interstitial nephritis.

He also told both (**Garella and Matarese., 1984**; **Blackshear et al., 1985**; **Kappus, 1986**; **Sergio and Antonio, 1997**; **James and Jonathan, 2013**; Atac et al., 2015) occurrence of renal and Hepatotoxicity in humans and experimental animals when non-astroidal anti-inflammatory drugs abuse.

Supported by (**Adams et al., 1986**) it was stated that the abuse of patients for drug kitoprophen due to damage to the glomeruli and explained that because of the occurrence of Nephrotoxicity caused by use of non-astroidal anti-inflammatory drugs.

He said (**Haschek and Rousseaux, 1991**) that 90% of the blood that connects College being in the crust and lots of toxic substances and metabolites in capillary glomerulosa concentrated in renal tubules nearby badly updated by nephrotoxicity.

He said (**Duarte and Preuss, 1993**) to Nephrotoxicity are in cells lining of pipes and pipe damage recognition by determining the ratio of urea and creatine in the blood.

We agreed (**Tse and Adu, 1998**), which stated that non-astroidal anti-inflammatory drugs can cause chronic renal failure and retention of salt and water, and hypertension and hyperkalemia.

And Edna (**Taber and Mueller, 2006**) where indicated that non-astroidal anti-inflammatory drugs and many toxic for the kidneys leading to acute renal failure in patients and death of many of them..

He explained (**Modi et al., 2012**) billions of doses of anti-inflammatories others astroidet are consumed annually making it responsible for the occurrence of toxicity that leads to death than any other makeshift, inhibitors and COX-2 may be less toxic than other NSAIDs toxicity were recorded in dogs that ate (alnimisolid) is the new generation NSAIDs astroidal over four days with an estimated dose (2 mg/kg) in infectious ulceration and Nephrotoxicity.

We have (**Simon and Mills, 1980**), where he explained that the non-astroidal anti-inflammatory drugs (NSAID) inhibition of cyclooxygenase action which reduces the production of prostaglandins and thrmoboxan.

As stated (**Adams et al., 1986**) that the inhibition of prostaglandins lead to continued decline in renal blood flow and thus the subsequent occurrence of nephrotic syndrome..

And male (**Brater, 2002**; **Iskandar, 2004**; **El-Maddawy and El-Ashmawy, 2013**) the inhibition of prostaglandins from the harmful effects caused by the drug diclofenac on liver and kidney tissues during long-term use.

III. Effect of parsley oil fabric:

Histological examination indicated sectors crust CLE native rats treated with parsley oil to different ages (1, 7, 15, 30) on:

The textile sectors were similar to those of control samples were characterized by the kidney to two areas: external zone is the crust and the Interior marrow. kidney was enclosed in a capsule of fibrous connective represents total cover and featured pellets consisting of renal glumulares wallet Baumann and appeared normal in size and glomeruli and also urinary tubes, as scrutiny of the crust was born in rats treated with holistic oil parsley 7-day similar to that of control groups (as described previously), perhaps due to the characteristics of the installation.

It has been used to treat stomach infections mediaeval as solvent for kidney stones and a good laxative and abdominal colic and asthma, shortness of breath and breast tumors and parsley seeds are used as a diuretic as indicated (**Marczal et al., 1997**) chemical analysis showed the presence of plant flavonoids, carotenoids and Ascorbic acid, alabiol, mersticin, Terpenoidsand comarin (**Tunali et al, 1999**).

According to folk medicine, parsley has antimicrobial as mentioned (**Manderfeld et al., 1997**; **Wong and Kitts, 2006**), reduce high blood pressure, clotting, hyper and fat liver poisoning (**Ozturk et al., 1991**), his effects to protect the membrane (**Fejes et al., 2000**) and is an antioxidant (**Nielsen, 1999**).

Said (**Fejes et al, 1998**; **Russo et al., 2003**) parsley leaves are rich in minerals and natural vitamins, ascorbic acid, flavonoids (apinin and glycosides).

He noted both (**Duthie and Dodson, 1999**) that parsley contains fat, fiber, proteins, sugars, and many minerals and vitamins, such as vitamin B12 (C) vitamin (A) beneficial to the eyes. Vitamin Depot is (B), such as (B1, B2, B3, B6) and is useful for the absorption of iron from other foods.

Added (**Yarnell, 2002**) that parsley is used in the treatment of many urinary disorders. He said (**Diaz-Maroto et al., 2003**) that parsley is widely used in cooking and as a result of its color and smell and flavor is used in the preparation of food and drink to improve taste and decoration.

He explained (**Yanardag et al., 2003**) is an important food parsley medically as a role in the treatment of many diseases because of effective compounds responsible for the therapeutic role.

Said (**Combest, et al 2005**) the following herbs used traditionally as diuretics: Juniper, parsley, dandelion, horsetail aozenb, asparagus root, leaf, leaf Gold Stick alkashm, bearberry, Nettle leaf, alfalfa Medicago sativa, with varying degrees of activity as a diuretic as it increases glomerular filtration rate and urinary output. in Germany, uses parsley for urinary tract clean and prevent the formation of kidney stones and urinary generating effect is due from the leaves and root of parsley to the oily components flyer mirsitisin and apiol.

Added (**Christin et al., 2005**) parsley roots plants that have aromatic leaves and attractive use in cooking or consumed fresh as seasoning, garnish and seasoning. Apart from his unique flavor it possesses important anasrghzaaeh of calcium, potassium (K), phosphorus (P), magnesium (Mg), iron (Fe), carotenoids.

It showed (**Hedaya, 2006**; **EL-Sarha et al., 2009**) respectively that when you give a rats turbine to extract seeds of parsley with dose) 200 mg/kg) for 12 weeks on the prevention and elimination of the mouth, giving a goat (3 GM) of crushed seeds of parsley every day for four weeks, so to increase the amount of hemoglobin and red blood cell count due to the reason that certain chemical compounds to parsley seed oil especially limonene and beta-carotene and coumarin work to erthropetin stimulating hormone (Erythropoietin) to form new red blood cells and thus increase the amount of hemoglobin Size cell CFL.

told (**Gadi et. al, 2009**) parsley of medicinal herbs that work to prevent platelet aggregation and thus is used to prevent heart disease and arterial blood vessels such as arterial hypertension.

Said (**Alakilli, 2010**) parsley of the camp plants containing volatile oils such as alabiol, merstisinwabinin; plus it contains a high concentration of vitamins (A, B, C), iron, calcium, potassium and sulfur.

Record (**Forster et al., 2011**) the turbine vehicles separated from P. crispum parsley plant affected the reproductive efficiency of mice males and led to an increase in testicular weights moral culverts and seminal vesicles walberrostat concentration hovers and hovers, as well as increasing diameters of tubules and tanker lining thickness tubules in the header and the guilt of the epididymis also found a direct correlation between the concentration of extract and the period of treatment.

He explained (**Hostetler et al., 2012**) the flavonoids found in parsley and celery has anti-inflammatory properties in vitro and in animal models.

And agreed with us (**Rashwan, 2012**) stated that giving rats white 5mg/kg) of body weight per day) of extract parsley by infectious tube has improved kidney function because of the antioxidant effect.

Record (**Saeidi et al., 2012**) that parsley has a therapeutic effect reduces the calcium oxalate deposits formed in infected mice bethasi kidney.

He noted (**Karimi et al., 2012**) that parsley oil is useful for treatment of some autoimmune diseases and allergies.

With description (**Awe and Banjoko, 2013**) parsley that bright green shrub widely used usually as a food additive and herbal treatments for many diseases.

According to (**Gunatillake, 2013**) that this herb is considered one of the basic foodstuffs as they contain folic acid, vitamin A or vitamin anti infection, and vitamin C is important for preventing diseases and helps maintain the body's immune functions and parsley is a good aperitif, light Enhancer for digestion and the production of urine and menstrual flow increases.

And did not agree to us in our (**Jellin et al., 2002**), where he found that some kinds of herbs like parsley has been associated with the emergence of features of nephropathy.

And also she contradicted us (**Al-Helali, 2012**) the results of the study revealed that giving rats white textile parsley leaves in quantity (1g/rat) for 10 days led to the swelling of the epithelium of the renal tubules and the emergence of small gaps within the cytoplasm and cells lining of tubules necrosis and alienating toward the cavity along with the advent of in vitro expansion and urinary contain colloid eosinopilic.

IV: effect of drug etoricoxib (arcoxia 90 mg) and parsley oil on kidney tissue:

In this study show the test by optical microscopy in samples treated with the;

Le drug oil parsley appearance many cells and tissues approach somewhat normal compared to the group treated with the drug only; it was noted a clear improvement in the tuft of capillaries llkbibeh in terms

of shape, size and cellular components return void polyurethane to natural likeness situation and the emergence of the visceral and parietal layers consisting of Bowman's portfolio as well as a lack or absence of bleeding and blood congestion in the Web interface on the urinary and walanibibat glomeruli, which was clearly visible in sectors Textile treatment only; coiled tubules near and far emerged nuclei epithelial cells lining the urinary llanibibat in natural image plus no dissolution of the cytoplasm of the cells lining of tubules or separation of some basal membrane; it already shows us the role oil parsley as a protective factor in limiting or reducing certain histological damage that may show in tissue treatment only.

It also showed a close examination of rind CLE native rats treated with parsley oil, property and age (7) days:

The emergence of cellular organelles found in the cells of glomeruli or urinary tubules in both shape and size and density, or stored within the cell as they were in the control group, the results are consistent with studies of textile balmghraldoaei. The glomeruli is composed of a group of micro noodle lugs lined on the inside with a layer of epithelial cells that TVs based on basal membrane glomerular and cells of glomeruli IPL glomerulosa cells know the median vein.

And agree with us (**Sener et al., 2003**), study on diabetic rats and suffering from nephropathy, parsley is capable of improvement tags in the kidney and is useful in treating early stages of kidney disease diabetes.

And agree us (**Yanardag et al., 2003**), where it was stated that one parsley herbal medicines that are widely used against diabetes occurring side effects on the kidney and the liver.

In a study (**Bolkent et al., 2004**), which aims to investigate both morphological and biochemical effects of parsley on liver tissue was examined in rat liver cells via almghraldoaei and e-mail changes was observed chronic liver cells in diabetic rats and these chronic changes significantly decreased or absent in cells of the liver of diabetic rats and treatment with parsley.

Concurred (**Amrani et al., 2012**), which noted the lack of pathological changes in glomeruli and coiled tubing near and far in the samples treated with the drug valobroat, sodium and parsley.

Record (**Jassim, 2013**) study on the liver tissue and kidney in male rats treated with white drug sodium valobroat (one of the antiretroviral drugs for spasticity, epilepsy) in a dose of 500 mg/kg and alcoholic extract of seeds of parsley with a dose of 200 mg/kg for up to seven weeks; the results of treatment with alcohol to extract parsley effectiveness in removing the toxic effects of the drug and regenerate damaged cells with advent of liver cells normally and did not show any changes in the level of textile and fabric cells appeared normal College, indicating that Parsley has an impact on the reform of the liver tissue and kidney and removing toxins from the body.

Reported (**Rezazad and Farokhi, 2014**) that in female rats treated with pregnant women aborted and then treated with albrostadine extract, parsley (5mg/kg), textile sectors showed normal glomerular, basal membrane, and capillaries plus appearance improvement in urinary vacuum tubule necrosis return to normalcy.

Proved (**Eltablawy et al., 2015**) that the aqueous extract of an effective agent for reducing parsley blood sugar and protects pancreatic beta cells against oxidative damage.

It was reported (**Lee et al., 2003**) and apiginin is the active substances in parsley has anti-inflammatory effects.

Proved (**Nelson and Oragsted, 1998**; **Ali, 2010**) active ingredient apiginin and flavonoid immune effect.

He told (**Kreydiyyeh et al., 2001**) that parsley possesses characteristics of softener that is due to the presence of certain volatile oils that are more focused on seeds than in stems or leaves.

He noted (**Combest et al., 2005**) parsley leaf increases glomerular filtration rate and urine output and is used to clean up the urinary tract and prevent the formation of kidney stones, urine-producing effect of leaf and root of parsley is due to volatile oil constituents of mirsiticin and apiol.

Scientists confirmed (**Kumar et al, 2005**; **Satarug et al., 2006**; **Tong et al, 2007**) to therapy role of apighinin where in the affected cells in liver regeneration.

And male (**Hostetler et al., 2012**) the flavonoids found in parsley and has anti-inflammatory properties in vitro and in animal models.

Proved (**Khudiar and Ahmad, 2012**) the preventive role of\ flavonoids learned from parsley leaves against damage in the liver under the influence over the cadmium.

As I indicated (**Reyhaneh, 2012**) parsley oil rich in vitamins C and E, which reduces the congenital and drug-induced valobroat in mice embryos.

He (**Nielson et al., 1999**) that parsley leaf antioxidant activity.

Proved (**Fejes et al., 2000**) that the antioxidant properties in parsley may be responsible for preventive effects.

And interpreted (**Ozsoy-Sacan et al., 2006**) that, perhaps because of the antioxidant property of parsley, a protective effect against hepatotoxicity induced by CCL4 and diabetes.

He said **(El-Beltagi and Abdel-Rahim, 2010)** parsley contains active antioxidant enzymes play a role in the fight against aging and disease, including Hyperlipidemia and atherosclerosis and cardiovascular disease.

She explained (**El-Shall and Badr, 2012**) parsley oil has a significant impact against the toxicity of cadmium chloride in liver by antioxidant activity.

Confirmed (Shalaby and Hammouda, 2014; Elkhamisy, 2015) that extract, parsley leaves and turmeric roots have a preventive effect and antioxidant effects against the Nephrotoxicity caused by the antibiotic gentamicin in the holistic male rat.

As proven (Soliman et al., 2015) that eat the aqueous extract of parsley lightens considerably, and overcome the oxidation improves heart tissue in diabetic rats.

And found both (**Fejes et al., 1998**; **Reyhaneh, 2012**) that parsley has a diuretic effect which helps to remove toxic substances from the body.

And tell (**Wong and Kitts, 2006**; **EL-Barbary and Mehrim, 2009**) about the capacity of the extract parsley protect hepatic pancreatic gland in fish from toxin aflatoxin.

He said (**Wright et al., 2007**) that the protective effect of parsley may be due to the parsley from traditional herbal plants that have income-generating property.

And between (**Saeidi et al., 2012**) for parsley tatheralagi where reduces calcium oxalate deposits formed in infected mice bethasi kidney.

And male (**Adnan et al., 2013**) that removes toxic infection and parsley-induced sodium, the hairs on the testicles in the male rats.

And proven (**AbouSeif, 2014**) that natural botanical ingredients in oil, parsley managed to protect the liver from rats of Hepatotoxicity induced by alcohol.

Conclusions:

On the basis of the above results, it could be concluded the arcoxia drug had toxic effects on the kidney tissue and that toxic effects might be due to the direct toxic influence of the drug on the cells or because of inhibition of the synthesis of prostaglandins where this will lead to continuous decline in renal blood flow and then occurrence of renal undesirable effects. Meanwhile the parsley oil showed a noticeable protective effect against toxicity of arcoxia drug and that might be because it had antioxidants property and contain it of an active substances.

Recommendations:

1- There may be no definitive treatment to get rid of the pain of chronic inflammation of arthritis so the most important ways to prevent this disease is attendance at exercise, maintaining a healthy weight, avoid exposing the joints for any injury and interest in the early detection of problems with the joints and bones.

2- The pregnant mother should avoid taking the drugs during pregnancy because of their detrimental effect on the embryo formation.

3- It should stay away as much as possible from the use any drug during a period of formation organs for the first three months of pregnancy in women so as not to cause these drugs in the incidence of developmental delay as they may occur histological changes in many organs.

4- In the case of a pregnant mother's use of the drug has to be the work of medical follow-up continuing to maintain of her safety and safety of the fetus.

5- It should reduce the amount of intaken dose of non-steroidal anti inflammatory drugs or analgesics and antipyretics generally and not take it except in cases of necessity.

6- It is recommended to use medicinal herbs such as parsley oil due to the multiplicity of its health benefits and because of its ability to relieve the adverse effects of drug.

7- It recommended to do more research and studies to increase oil dose based on preliminary experiments if the greater the quantity dose and time the result was better.

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9/23/2016