RESULTS

A total of 900 patients (520 males and 380 females) were examined.

I – General outlines :

1- Classification in general :

500 cases hepatitis C (430 cases were chronic and 70 cases were acute) and 400 cases hepatitis B (300 cases were chronic and 100 cases were acute).

2- Past history :

There was a past history of blood transfusion in 180 patients (20%). Also there was a past history of repeated intravenous drug administration in 135 patients (15%) of cases.

50 patients (5%) gave a past history of exposure to hepatitis patients.

Patients with skin disorders had a negative past history of similar skin lesions prior to the development of hepatitis.

3- Family history :

There was a family history of hepatitis in 100 patients (11%). Family history of similar skin disease was irrelevant.

4- Residence :

The incidence of hepatitis was found more in rural (540 patients (60%)] than urban areas [360 patients (40%)].

5- Occupation :

500 patients (55%) were employers of them 150 patients (16.6%) were females

6- Follow up :

200 patients (22%) had a recent history of hepatitis < 6 months. 700 patients (78%) were old hepatitis cases.

II- Clinical data of hepatitis patients :

These are summarized in the following tables :

Table (1): Age range in years among the studied hepatitis patients according to their type of hepatitis.

Type of heptitis	Range		X	± S.D.
	minimum	maximum		
Hepatitis B (n = 400)	20	65	35.5	11.9
Hepatitis C (n = 500)	18	70	44.6	12.33

P > 0.05

There was no significant difference between hepatitis B and hepatitis C.

Table (2): Sex distribution of the studied hepatitis patients according to the type of viral hepatitis.

Type of hepatitis	Male		Female		Total		Z	P
	No.	%	No	%	No.	%		
Hepatitis B	150	28.8	250	65.8	400	44.4	2.11	< 0.05
Hepatitis C	370	71.2	130	34.2	500	55.6	3.23	< 0.05
Total	520	100.0	380	100.0	900	100.0		

The prevalence of hepatitis B was significantly higher in females than males and the prevalence of hepatitis C was significantly higher in males than females.

Table (3): Shows the duration range (in years) of viral hepatitis of the studied hepatitis patient's according to their type of hepatitis.

Type of hepatitis	X	± S.D.	Minimum	Maximum
Hepatitis B (n = 400)	3.1	1.2	0.2	6
Hepatitis C (n = 500)	3.2	0.7	0.1	5

P > 0.05

There was no significant difference between the two types of hepatitis.

7- Skin disorders asscoiated with hepatitis patients :

Out of 900 patients 60 patients (6.6%) had skin lesion. The onset of skin lesions followed the onset of hepatitis in all the cases.

Sixth hepatitis patients presents with a maculopapular rash with a symmetrical distribution developed on the elbows, back and extensor areas of the limbs. A punch biopsy was done. The histopathological picture was typical of erythema multiforme, consisting of epidermal necrosis, perivascular infilterates, with pronounced oedema, and vacuolization of the epithelial basement membrane with focal spongiosis.

Eighteenth hepatitis patients presents with itchy violaceous, flat topped papules in the extremities. Ten patients presents with oral lesions in the form of white reticular streaks,papules, and ulcers involving the buccal mucosa. A punch biopsy was done. The histopathological picture was typical of lichen planus, consisting of band like infiltrate of lymphocytes within the papillary dermis, epidermal basal layer necrosis with hyaline bodies, and epidermal changes such as hyperkeratosis, acanthosis and hypergranulosis.

Two hepatitis patients presented with multiple red brown macules and plaques on the lower extremities. A punch biopsy was done. The histopathological picture was typical of lymphocytic vasculitis, consisting of angiocentric lymphocytic infilterate involving small and medium sized arteries within the superficial dermis, perivascular haemorrhage. Cryoglobulin test was done and was –ve.

Two hepatitis patients presented with multiple indurated flat to slightly raised red plaques on the lower extremities. Apunch biopsy was

done. The histopathological picture was typical of leukocytoclastic vasculitis, consisting of mixed superficial perivascular inflammatory infilterate composed of neutrophils, lymphocytes, nuclear dust at the vessel wall, endothelial swelling and perivascular haemorrhage. Cryoglobulin test was done and was –ve.

Fiftheenth cases presenting with picture typical of urticaria in the form of pruritic pink white wheals in the extremities, back and abdomen.

Four cases presenting with picture typical of erysipelas in the form of well demarcated erythematous hot tender swelling in the lower limbs with enlarged inguinal lymph node.

Four cases presenting with picture typical of tinea versicolour in the form of white and brownish scaly macules in the neck, chest and back. KOH examination was done and was +ve.

Four cases presenting with picture typical of tinea circinata in the form of itchy well defined circinate lesions with an active raised red edge covered with minute papules and pustules, the centre of the lesion show evidence of healing.

KOH examination is done and was +ve.

Five cases presenting with picture typical of psoriasis in the form of well defined erythematous papules and plaques covered with silvery laminated scales in the knees, elbows and back. Ospitz sign was +ve

8- Current skin signs associated with liver diseases :

Out of the 900 patients, 276 (27.6%) had the following :

- Palmar erythema, 30 patients (3.3%).
- Jaundice , 50 patients (5.5%).
- Hyperpigmentation, 36 patients (4 %).
- Spider nevi, 15 patients (1.6%).
- Dilated umbilical veins (Caput medusae), 10 patients (1.1%).
- Gynecomastia, 9 patients (1%).
- Cutaneous striae, 25 patients (2.7%).
- Splinter haemorrhage under the nails, 11 patients (1.2%).
- Clubbing of fingers, 90 patients (10%).

9- All hepatitis patients were given palliative therapy. No one had specific interferone therapy.

III- Statistical analysis of hepatitis patients with associated skin disease :

Table (4): Mean and standard deviation of age among the studied group.

Age / Type of hepatitis	Range		X	± S.D.
	Minimum	Maximum		
Hepatitis B (n = 14)	18	62	41.1	11.6
Hepatitis C (n =46)	18	70	44.7	12.3
t	1.007			
P	> 0.05			

There was no significant difference between hepatitis B and hepatitis C.

Table (5): Distribution of the studied group according to sex and type of hepatitis.

Sex / Type of hepatitis	Male		Female		Z	P
	No.	%	No.	%		
Hepatitis B	12	24.5	2	18.2	0.21	> 0.05
Hepatitis C	37	75.5	9	81.8	0.43	> 0.05

Though the prevalence of skin disorders in hepatitis patients was higher in males than females, but there was no significant difference in sex between the two types of hepatitis.

Table (6): Range of duration of hepatitis (in years) among the studied group.

Duration / Type of hepatitis	Range		X	± SD
	Minimum	Maximum		
Hepatitis B	1	5.5	3.07	± 2.64
Hepatitis C	1	4	3.35	± 2.31
t	0.35			
P	> 0.05			

The duration difference of the two types of hepatitis in patients with associated skin lesions were not significant.

Table (7): Prevalence of skin lesion among the studied hepatitis patients according to the type of hepatitis.

Skin lesion	Hepatitis B		Hepatitis C		Total	
	No.	%	No.	%	No.	%
Present	14	3.75	46	9	60	6.7
Absent	386	96.25	454	91	840	93.3
Total	400	100.0	500	100.0	900	100.0

$P > 0.05$

Though hepatitis C showed a higher prevalence of skin lesions the difference between the two types was not significant.

Table (8): Cutaneous disorders of the studied group according to the type of viral hepatitis.

Skin lesion	Hepatitis B		Hepatitis C		Total	
	No.	%	No.	%	No.	%
Erythema multiforme			6	13.04	6	10
Lymphocytic vasculitis			2	4.3	2	3.3
Leukocytoclastic vasculitis	1	7.1	1	2.1	2	3.3
Lichen planus	8	57.1	10	21.7	18	30
Urticaria	3	21.4	12	26.08	15	25
Erysipelas	1	7.1	3	6.5	4	6.6
Tinea versicolour			4	8.6	4	6.6
Tinea circinata			4	8.6	4	6.6
Psoriasis	1	7.1	4	8.6	5	8.3
Total	14	100	46	100	60	100

Table (9): Skin disorders in Egyptian patients with viral hepatitis in relation to sex and duration.

Type of skin lesion	Male	Female	Total	Mean age	Mean duration of hepatitis	Mean duration of skin lesion	% Skin lesion (60)	% Total (900)	Z	P
Erythema muliforme (n =6)	5	1	6	42.8	1.5	0.5	10%	0.7%	0.035	>0.05
Lymphocytic vasculitis (n =2)	2		2	45.5	1.5	0.4	3.3%	0.22%	0.292	> 0.05
Leukocytoclastic vasculitis (n =2)	2		2	31.5	2	0.6	3.3%	0.22%	0.292	> 0.05
Lichen planus (n =18)	14	4	18	43.9	4.3	0.8	30%	2%	0.289	> 0.05
Urticaria (n=15)	12	3	15	39.9	3.4	1.5	25%	1.6%	0.513	> 0.05
Erysipelas (n =4)	4		4	47.5	1.8	0.3	6.6%	0.44%	0.596	> 0.05
Tinea versicolour (n = 4)	4		4	31.8	3.8	0.2	6.6%	0.44%	0.596	> 0.05
Tinea circinata (n = 4)	3	1	4	63.8	2.5	0.4	6.6%	0.44%	0.092	> 0.05
Psoriasis (n =5)	1	4	5	48	3.6	2	8.3%	0.55%	0.029	> 0.05
Total			60							

Though the prevalence of all skin lesion was highest in males in all types of skin lesion but there was no significant difference between males and females.

IV- **Results of the serological investigations :**

1- HBsAg was found +ve in 400 patients (44.4%) of them 14 (3.5%) had associated skin disorders.

2- HCV Ab was +ve in 500 patients (55.6%), of them 46 (7.5%) had associated skin disorders.

3- The patients had elevation of total serum bilirubin, the liver enzymes SGOT, SGPT and of alkaline phosphatase.

Table (10) : Shows liver serological tests in HBV and HCV patients.

Variables	Alkaline phosphatase			SGPT			SGOT			Total bilirubin		
Type of hepatitis	Range	X	±SD	Range	X	±SD	Range	X	± SD	Range	X	± SD
HBV	15-100	40.7	27.5	12-140	50.85	41.9	11-160	52.57	44.8	1-30	3.97	7.52
HCV	12-133	33.5	29.6	12-230	52.15	43.9	11-150	44.7	34.5	0.9-30	2.07	4.25
t	0.837			0.1001			0.605			0.903		
P	>0.05			>0.05			>0.05			>0.05		

No significant difference was found between the two groups.

Table (11): Shows the results of liver serology in regards to the skin diseases.

Variables	Total bilirubin		SGPT		SGOT		Alkaline phosphatase	
Skin diseases	X	± SD	X	± SD	X	± SD	X	± SD
Psoriasis	1.28	0.63	53.0	43.5	59.0	36.6	27.6	8.9
Lichen planus	1.57	0.50	50.61	41.34	49.5	46.4	28.9	13.2
Erysipelas	2.45	0.83	73.75	48.02	90.5	42.9	90.0	47.6
Tinea versicolour	1.5	0.58	69.25	51.89	40.0	7.07	47.75	57.05
Tinea circinata	2.2	2.5	98.75	90.96	25.0	7.07	36.25	26.3
Urticaria	5.2	10.08	35.53	20.92	37.7	29.9	30.5	29.7
Erythema multiforme	1.9	0.5	47.5	37.1	50.5	36.2	27.0	15.6
Lymphocytic vasculitis	1.05	0.07	25.0	7.07	51.5	54.5	20.0	7.07
Leukocytoclastic vasculitis	2.0	0.0	55.0	49.5	45.0	21.2	43.0	4.24
P	> 0.05		> 0.05		> 0.05		> 0.05	

There was no significant correlation between the liver serological tests and the skin disorders.

4- Blood urea was elevated in 2 patients, creatinine in 4 patients, cholesterol in 10 patients and F.B.S. in 26 patients 5 of than had lichen planus.

5- Urine analysis was irrelevant.

Table (12): Shows mean and standard deviation of blood urea, creatinine, cholesterol and fasting blood sugar in patients with skin diseases.

Variables / Skin diseases	Urea		Creatinine		Cholesterol		F.B.S.	
	X	± SD	X	± SD	X	± SD	X	± SD
Psoriasis	20.4	4.6	0.88	0.1	213.0	25.9	99.0	6.5
Lichen planus	23.6	7.1	0.97	0.1	193.6	26.05	109.2	27.5
Erysipelas	22.0	2.3	0.97	0.05	185.0	20.0	101.2	6.3
Tinea versicolour	25.0	5.8	8.05	8.7	142.7	100.02	120.0	53.5
Tinea circinata	28.0	8.1	5.4	9.05	163.75	21.4	126.25	36.60
Erythema multiforma	23.0	6.3	0.98	0.1	230.0	47.2	124.2	29.7
Lymphocytic vasculitis	20.0	7.07	1.0	0.0	222.5	102.5	97.5	3.5
Leukocytoclastic vasculitis	27.5	3.5	1.0	0.0	220.0	42.43	102.5	10.6
Urticaria	19.1	4.7	14.7	48.7	190.7	58.6	112.0	30.8

Results were found insignificant.