Results

RESULTS

This study included 30 children with severe pneumonia and 20 healthy children representing the controls group.
The results of present study are shown in tables (27-37).

(27): Statestical analysis of basic characteristics and laboratory data of cases:

	N	Minimum	Maximum	Mean	Std. Deviation
Age (months)	30	24	45	28.00	5.246
Sex (male:female) No. (%)	30	15:15 (50%:50%)			
Residence (urban:rural) No.(%)	30	12:18 (40%:60%)			
Disease duration (Days)	30	4	13	7.30	2.184
HR(/min)	30	120	150	129.93	8.354
RR(/min)	30	40	45	42.63	1.671
Temp (°C)	30	38.0	39.0	38.493	.3562
Hb(gm/dI)	30	7.80	12.40	9.6807	1.27100
TLC (x103/mm3)	30	4.70	27.20	11.0303	5.32237
Neutrophils	30	23.4	81.0	57.087	18.2282
Lymphocytes (%)	30	8.20	81.00	34.6903	17.33306
Eosinophils (%)	30	.01	3.350	2.4371	6.07216
Basophils (%)	30	.000	1.800	.55897	.525901
PLT(x103/mm3)	30	141	626	369.70	112.878
CRP	30	15	80	37.93	17.697
PaO2mmHg	30	41	90	68.04	13.154
PaCO2(%)	30	18.7	45.0	34.053	5.5950
SaO2(%)	30	76	92	88.96	4.676
Serum Zinc µg/dl	30	45	83	59.47	11.536

The table shows statestical analysis of basic characteristics and laboratory data of cases : There was 15(50%) males and 15(50%) females.
Urban representing 12(40%) and rural representing 18(60%)

Table (28): Statestical analysis of basic characteristics and laboratory data of controls:

	N	Minimum	Maximum	Mean	Std. Deviation
Age (months)	20	24	48	31.35	8.305
Sex (male: female) No.(%)	20	10:10 (50%: 50%)			
Residence (urban:rural) No.(%)	20	6:14 (30%: 70%)			
HR(/min)	20	90	140	117.55	14.566
RR(/min)	20	20	35	28.35	4.043
Temp (°C)	20	37.0	37.8	37.205	.2605
Hb(gm/dI)	20	8.25	12.90	10.2415	1.40303
TLC (x103/mm3)	20	4.25	20.80	10.9515	3.75076
Neutrophils	20	24.4	85.6	55.515	20.3573
Lymphocytes (%)	20	8.10	61.80	35.2263	19.81231
Eosinophils (%)	20	.30	7.30	2.1621	2.08079
Basophils (%)	20	.079	2.520	.86890	.772105
PLT(x103/mm3)	20	130	614	392.75	129.358
CRP	20	2	11	5.45	2.417
Serum Zinc μg/dl	20	70	119	90.00	13.211

The table shows statestical analysis of basic characteristics and laboratory data of controls.

There was 10(50%) males and 10(50%) females.

Urban representing 6(30%) and rural representing 14(70%).

Table (29): Comparison between cases and control as regard:

		N	Mean	Std. Deviation	t	P
Age (months)	cases	30	28.00	5.246	1.6	>0.05
	control	20	31.35	8.305		
HR(/min)	cases	30	129.93	8.354	3.4	<0.01
	control	20	117.55	14.566		
RR(/min)	cases	30	42.63	1.671	14.9	<0.001
	control	20	28.35	4.043		
Temp (°C)	cases	30	38.493	.3562	13.9	<0.001
	control	20	37.205	.2605		

In comparison between cases and controls as regard : age, HR, RR, Temp :

-Although the mean age (months) was higher in controls compared to cases, yet that difference did not reach the statistical significance (P > 0.05).

-As regard to HR, RR, Temp, were significantly higher in cases compared to controls.

Table (30): Comparison between cases and control as regard laboratory data

		N	Mean	Std. Deviation	T	P
Hb(gm/dI)	cases	30	9.6807	1.27100	1.5	>0.05
	control	20	10.2415	1.40303		
TLC (x103/mm3)	cases	30	11.0303	5.32237	0.1	>0.05
	control	20	10.9515	3.75076		
Neutrophils	cases	30	57.087	18.2282	0.3	>0.05
	control	20	55.515	20.3573		
Eosinophils (%)	cases	30	2.4371	6.07216	0.2	>0.05
	control	20	2.1620	2.08079		
Basophils (%)	cases	30	.55897	.525901	1.6	>0.05
	control	20	.86890	.772105		
PLT(x103/mm3)	cases	30	369.70	112.878	0.6	>0.05
	control	20	392.75	129.358		
Lymphocytes (%)	Cases	30	34.69	17.333	0.1	>0.05
	control	19	35.23	19.812		

In comparison between cases and controls as regard: CBC (Hb, TLC, Neutrophils, Eosinophils, Basophils, Lymphocytes and PLT) the difference between both groups was statistically insignificant.

Table (31): Comparison between cases and control as regard:

		N	Mean	Std. Deviation	t	P
CRP	Cases	30	37.93	17.697	9.9	<0.001
	control	20	5.45	2.417		

In comparison of CRP between cases and controls ,the difference was statistically highly significant.

Table (32): Comparison between cases and controls as regard:

		N	Mean	Std. Deviation	t	P
Serum Zinc µg/dl	cases	30	59.47	11.536	8.4	<0.001
	control	20	90.00	13.211		

The mean serum zinc levels and standard deviation in cases were (59.47±11.536 µg /dL) and in controls were (90±13.211 µg /dL) .The difference between both groups was statistically highly significant (P <0.001).
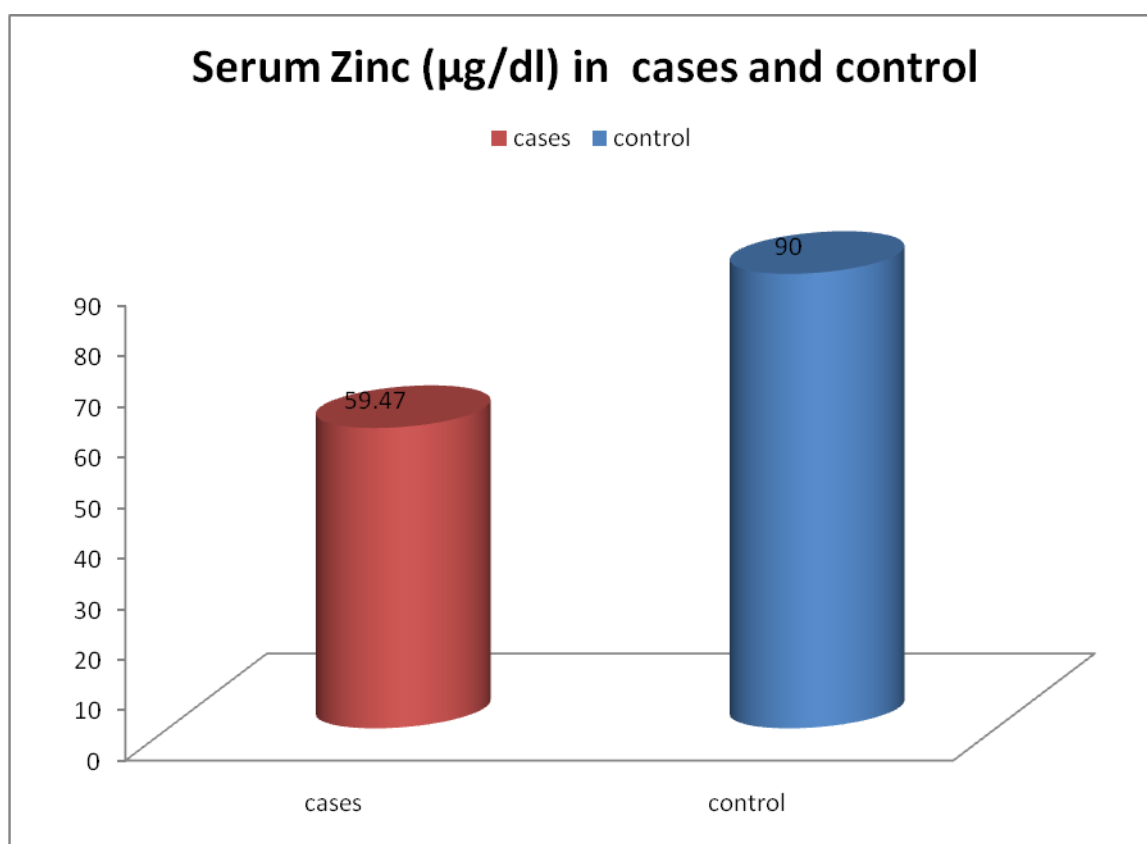
Figure (1)

Serum Zinc (µg/dl) in cases and control

Table (33): Comparison of serum zinc level as regard residence:

		N	Mean	Std. Deviation	t	P
Cases	Rural	18	51.67	5.314	8.3	<0.001
	Urban	12	71.17	7.638		
Control	Rural	14	83.43	8.197	5.3	<0.05
	Urban	6	105.33	9.245		

The serum zinc levels (of cases and controls) were significantly lower in rural areas as compared to urban areas
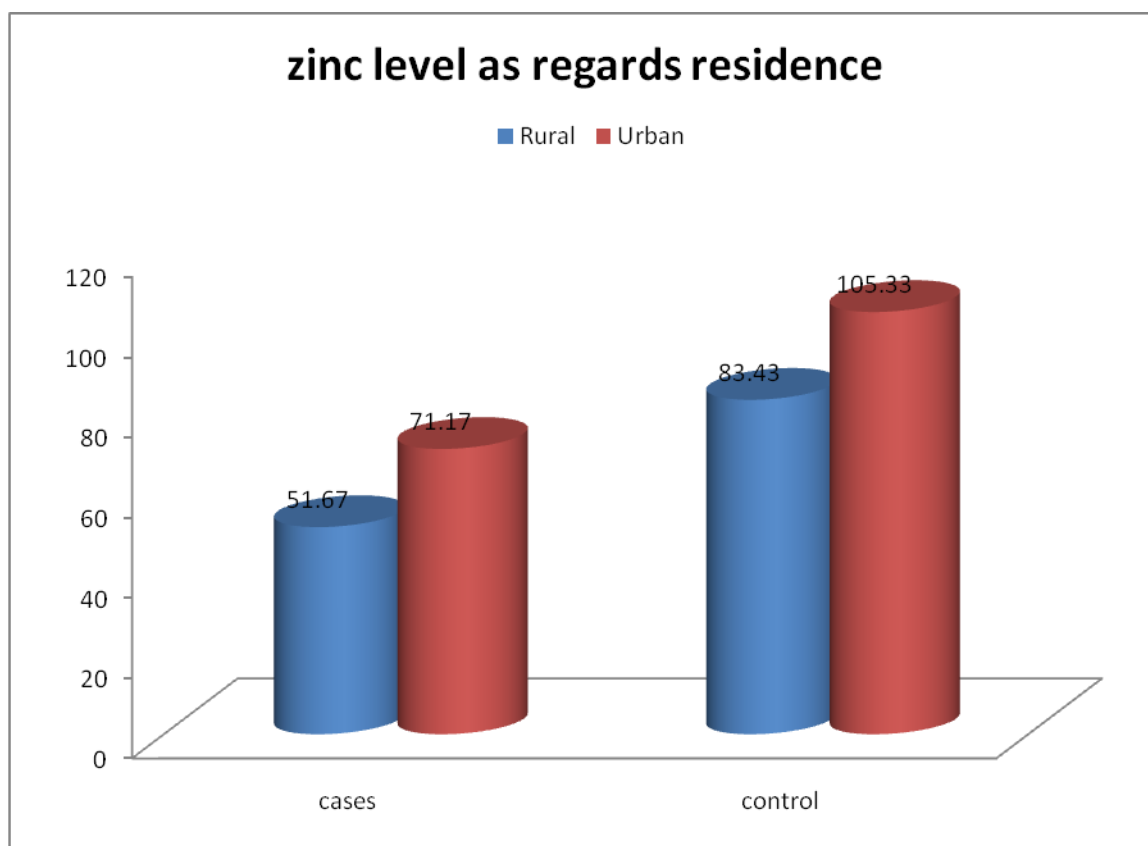
Figure (2)

Table (34): Comparison of serum zinc level in male and female in rural and urban areas in cases:

	Sex	N	Mean	Std. Deviation	t	P
Rural	M	12	50.58	3.315	0.9	>0.05
	F	6	53.83	7.960		
Urban	M	3	70.67	11.590	0.1	>0.05
	F	9	71.33	6.819		

The table shows that there is no significant difference in the mean serum zinc level between males and females in cases.
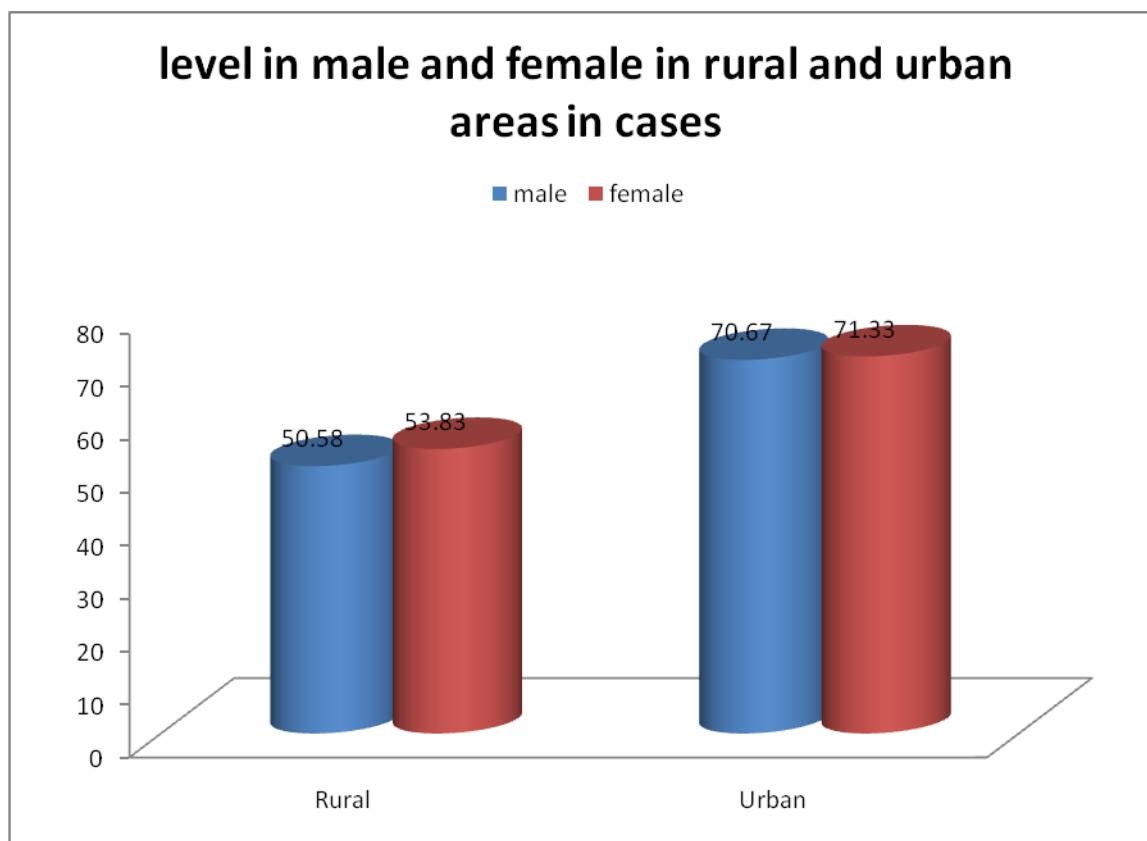
Figure (3)

Table (35): Comparison of zinc level in male and female in rural and urban areas in control:

	Sex	N	Mean	Std. Deviation	t	P
Rural	M	5	83.20	7.596	0.1	>0.05
	F	9	83.56	8.960		
Urban	M	5	106.20	10.060	---	--
	F	1	101.00	---		

The table shows that there is no significant difference in the mean serum zinc level between males and females in controls.
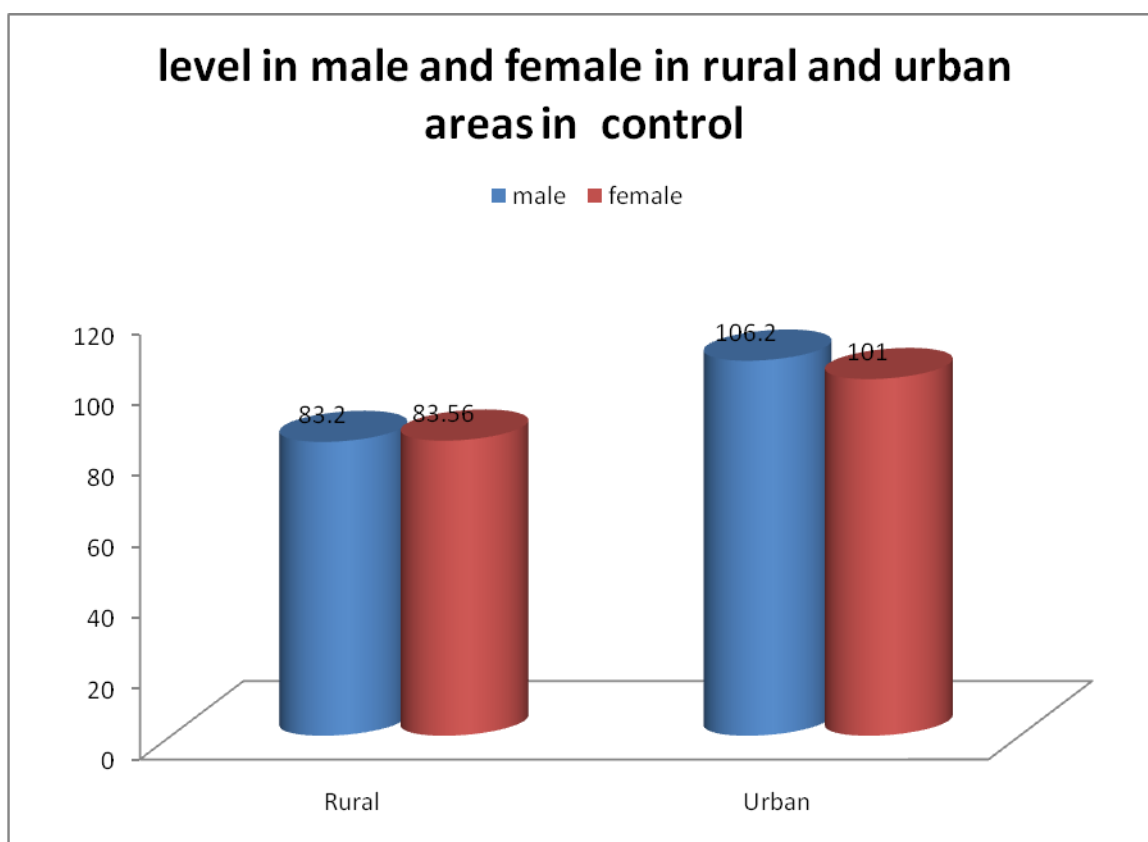
Figure (4)

Table (36): Comparison of serum zinc level in cases and control in each sex:

		N	Mean	Std. Deviation	t	p
Female	cases	15	64.33	11.312	4.7	<0.001
	control	10	85.30	10.089		
Male	cases	15	54.60	9.847	8.2	<0.001
	control	10	94.70	14.750		

The table shows the significant difference in mean serum zinc levels between females in cases and females in controls & the significant difference between males in cases and males in controls.

Table (37): Comparison of zinc level in cases and control in each residence:

		N	Mean	Std. Deviation	t	p
Rural	cases	18	51.67	5.314	12.6	<0.001
	control	14	83.43	8.197		
Urban	cases	12	71.17	7.638	8.4	<0.001
	control	6	105.33	9.245		

The table shows that there is significant difference in mean serum zinc levels between cases and controls in rural areas & there is significant difference in mean serum zinc levels between cases and controls in urban areas.