RESULTS

This study was done on fifty patients with AD (28females & 22males), their ages ranged from 0.5 to 24 years with mean age (4.44±5.19years), and twenty controls (12femals&8males) their ages ranged from 1.5-18 years with mean age (8.21±7.43years).

Table(7): Comparison between patients & controls as regarding age.

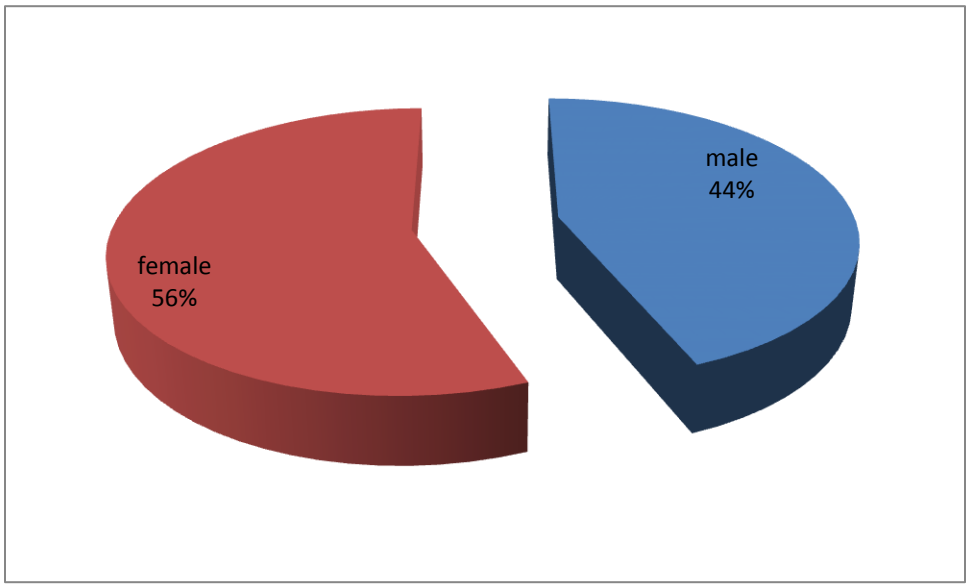
	Group	Number	Age	T	P
Age	patient	50	0.5-24 year 4.44 ± 5.19	2.052	<0.05
	Control	20	1.5-18 year 8.21 ± 7.43		

Table (7) shows that there is statistically significant difference between patient and control as regarding age.

Table(8) : Comparison between patients & controls as regarding sex.

	patients		control		Total	Chi-square	
	No.	%	No.	%		X^2	P-value
female	28	56	12	60	40	0.093	> 0.05
male	22	44	8	40	30		
Total	50	100	20	100	70		

Table (8) shows that there is no statistically significant difference between patient and control as regarding sex .



Figure(2): Sex distribution among the patients.

Figure (3) shows that there were 30 patients had mild AD (60%) of patients, 16 patients had moderate AD (32%) of patients and 4 patients had severe AD (8%) of patients .

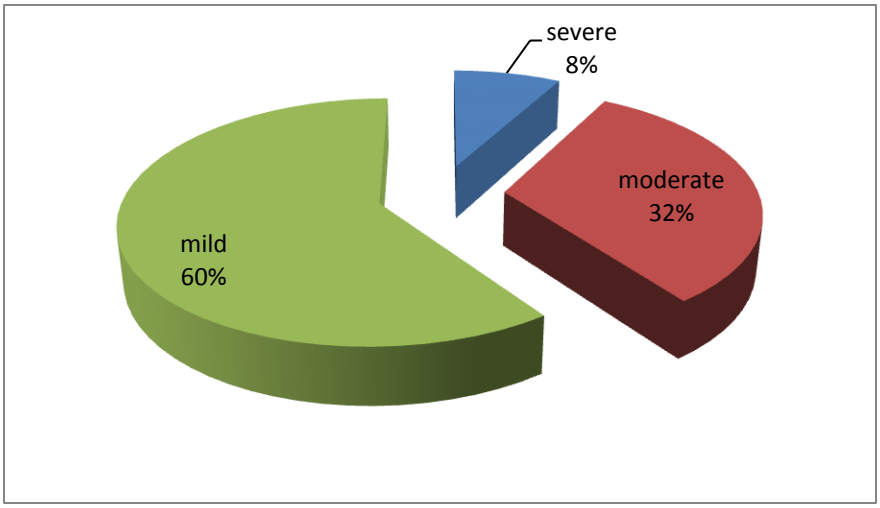


Figure (3): The percentage of patients according the severity of AD.

Figure (4) show that there were 24 patients their age ≤ 2 (48%) , 18 patients their age > 2 and ≤ 12 (36%) and 8 patients their age > 12 (16%).

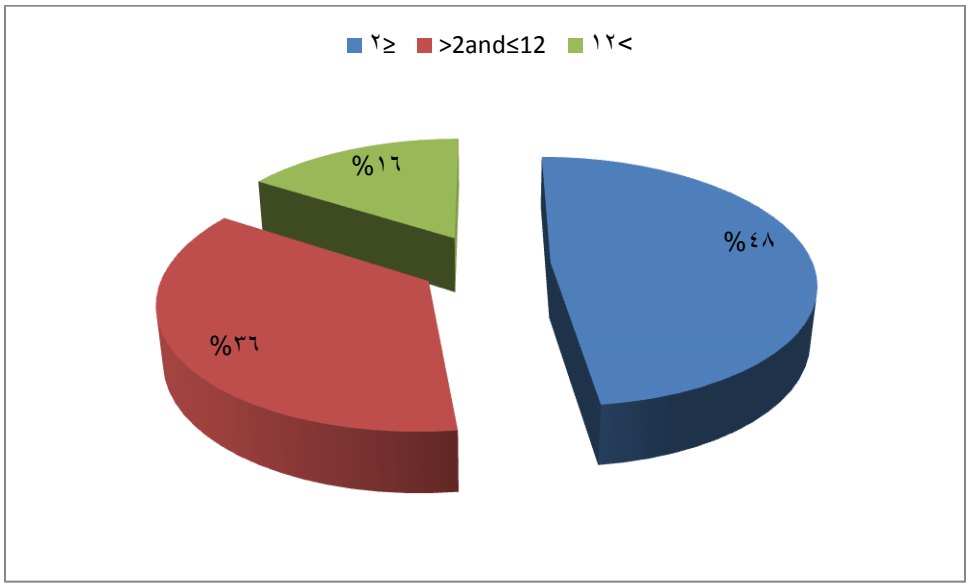


Figure (4): The percentage of patients according the patients age.

Table (9) : percentage of S.aureus colonization in AD patients according to age and severity.

S.aureus colonization in patients (%)							
Site of swabs	Total%	According to age			According to disease score		
		≤2	>2and≤12	>12	Mild	Moderate	Severe
Lesional skin	70%	50%	83.3%	100%	53.3%	93.75%	100%
Non lesional skin	24%	20.8%	22.2%	37.5%	10%	31.25%	100%
Nasal	40%	25%	44.4%	75%	33.3%	37.5%	100%

Table(10): Comparison between patients & control as regarding the result of skin lesion swabs.

	Cases		Control		Total	Chi-square	
	No.	%	No.	%		X^2	P-value
Positive	35	70	2	10	37	20.64	<0.0001
Negative	15	30	18	90	33		
Total	50	100	20	100	70		

Table(10) and figure (5) show there is statistically highly significant increased incidence of skin S. aureus colonization in patients .

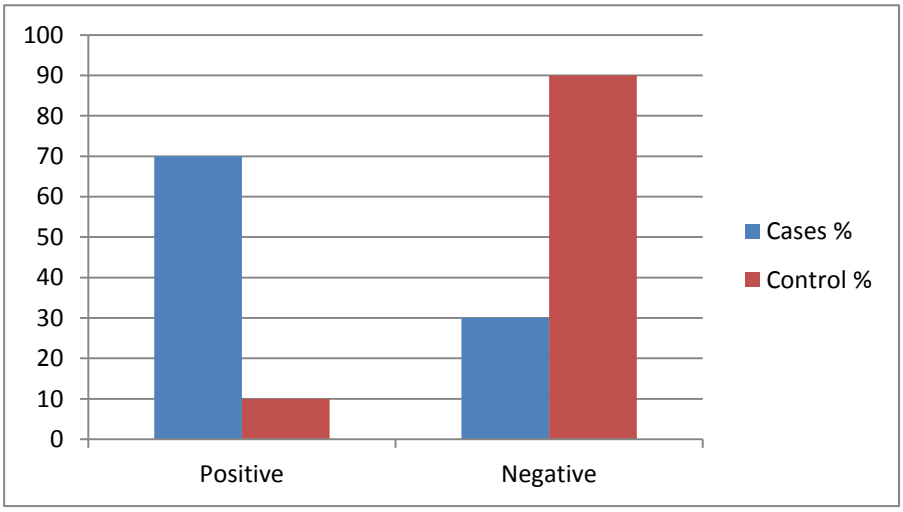


Figure (5): Comparison between patients & controls as regarding the result of skin lesion swabs.

Table(11): Comparison between patients & controls as regarding nasal swabs.

	Cases		Control		Total	Chi-square	
	No.	%	No.	%		X^2	P-value
Positive	20	40	3	15	23	4.05	<0.05
Negative	30	60	17	85	47		
Total	50	100	20	100	70		

Table(11) and figure (6) show that there is statistically significant increased incidence of nasal S. aureus colonization in patients .

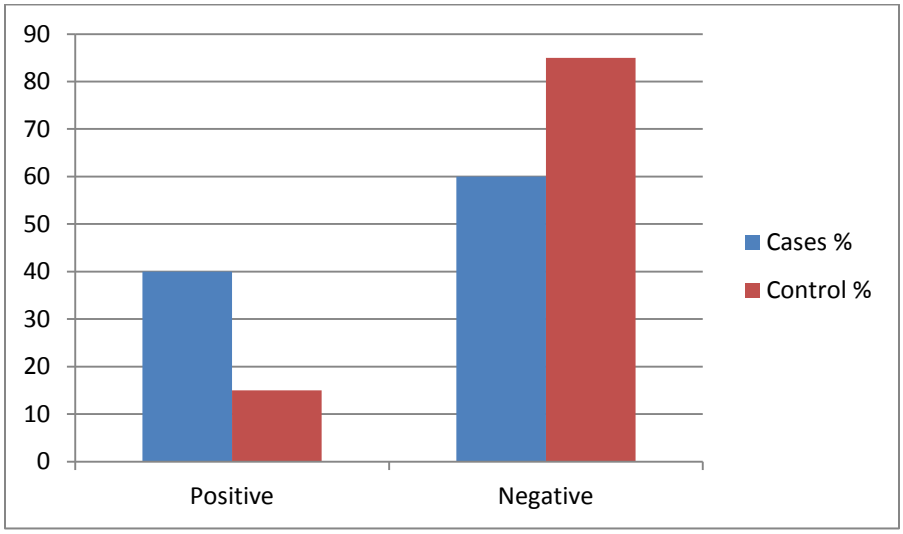


Figure (6): Comparison between patients & controls as regarding nasal swabs.

Table(12): Comparison between positive & negative skin lesion swabs in patients as regarding sex.

	females		males		Total	Chi-square	
	No.	%	No.	%		X^2	P-value
positive	18	64.3	17	77.3	35	0.99	P > 0.05
negative	10	35.7	5	22.7	15		
Total	28	100	22	100	50		

Table(12) and figure (7) show that there is no statistically significant difference between positive & negative skin lesion swabs in patients as regarding sex.

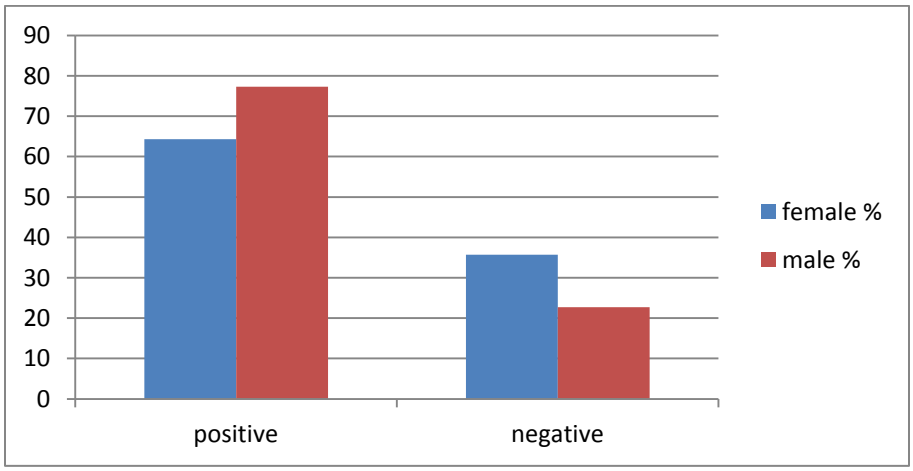


Figure (7): Comparison between positive & negative lesion skin swabs in patients group as regarding sex.

Table(13): Comparison between patients skin swab in skin lesion and non-lesion skin swabs.

	lesion		Non lesion		Chi-square	
	No.	%	No.	%	X^2	P-value
patient	35	70	12	24	25.25	P <0.0001

Table (13) Figure (8 **)** show that there is statistically highly significant increased incidence of skin lesion S. aureus colonization than non-lesion .

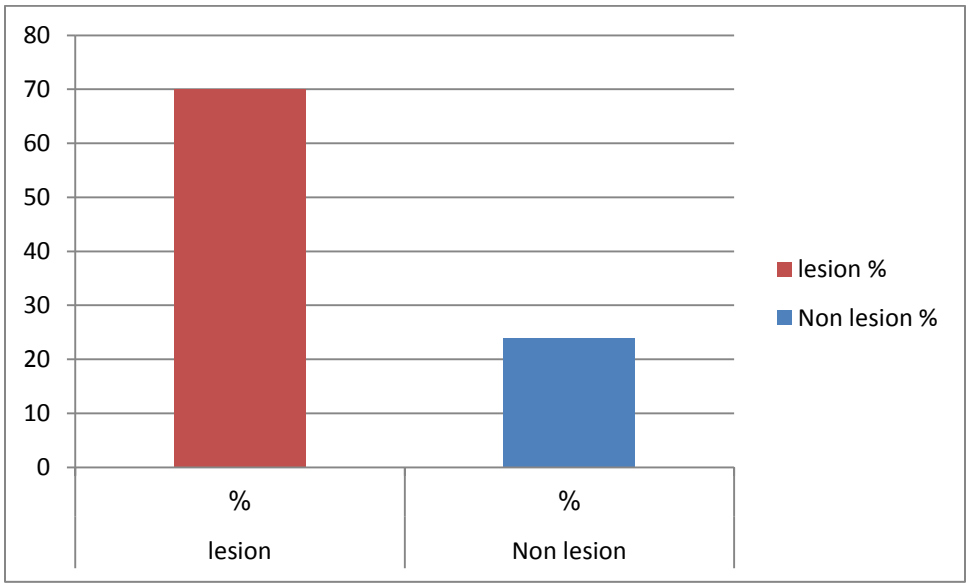


Figure (8):Comparison between The percentage of patients skin swab in lesion and non-lesion.

Table(14): Comparison between percentage of S. aureus isolates in patients with AD according to disease severity in skin lesion swab.

	Mild		Moderate		Severe		Total		Chi-square	
	No	%	No	%	No	%	No	%	X^2	P-value
Positive	16	53.3	15	93.75	4	100	35	70	9.98	<0.05
Negative	14	46.7	1	6.25	0	0	15	30		
Total	30	100	16	100	4	100	50	100		

Table(14) and figure (9)show that there is statistically significant increased incidence of skin S. aureus colonization with severity of AD .

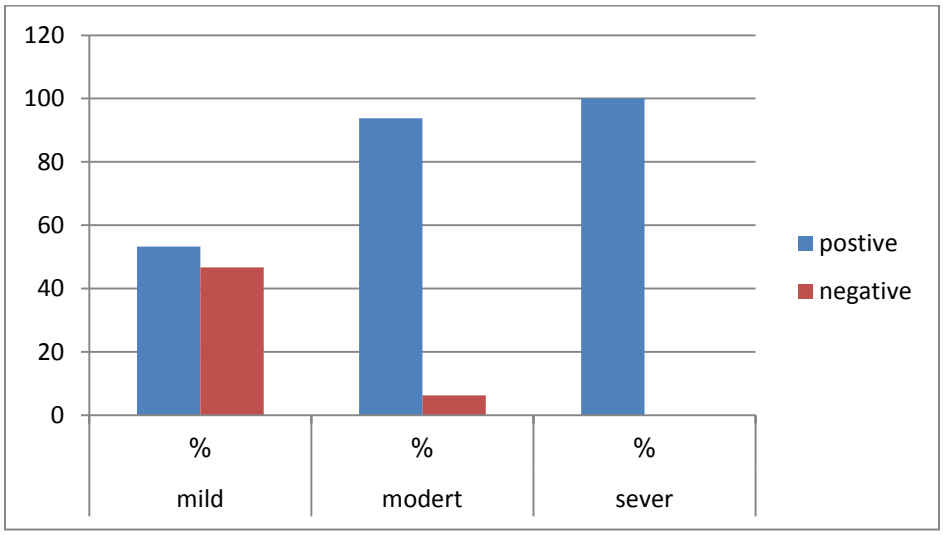


Figure (9):Comparison between percentage of S. aureus isolates in patients with AD according to disease severity in skin lesion swabs.

Table(15): Comparison between percentage of S. aureus isolates in patients with AD according to disease severity in nasal swabs.

	Mild		Moderate		Severe		Total		Chi-square	
	No	%	No	%	No	%	No	%	X^2	P-value
Positive	10	33.3	6	37.5	4	100	20	40	9.6	<0.05
Negative	20	66.7	10	62.5	0	0	30	60		
Total	30	100	16	100	4	100	50	100		

Table(15) and figure (10) show that there is statistically significant increased incidence of nasal staphylococci with severity of AD.

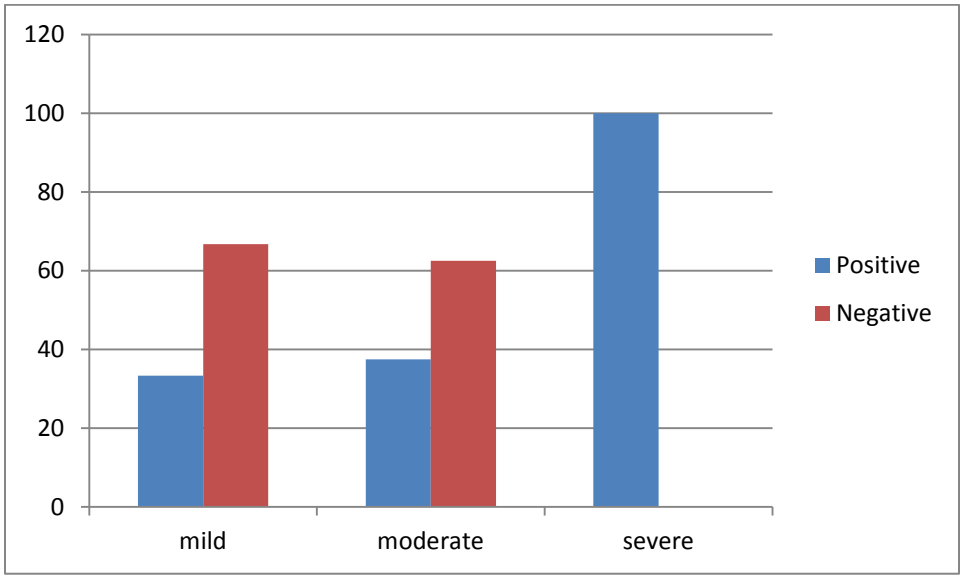


Figure (10) : Comparison between percentage of S. aureus isolates in patient with AD according to disease severity in nasal swabs.

Table(16):Comparison between percentage of S.aureus isolates in patients with AD according to disease severity in non lesional skin swabs.

	mild		Moderate		severe		total		Chi-square	
	NO	%	NO	%	NO	%	NO	%	X^2	P-value
positive	3	10	5	31.25	4	100	12	24	16.76	<0.05
negative	27	90	11	68.75	0	0	38	76		
total	30	100	16	100	4	100	50	100		

Table(16) and figure(11) show that there is statistically significant increased incidence of non lesional skin S. aureus colonization with severity of AD.

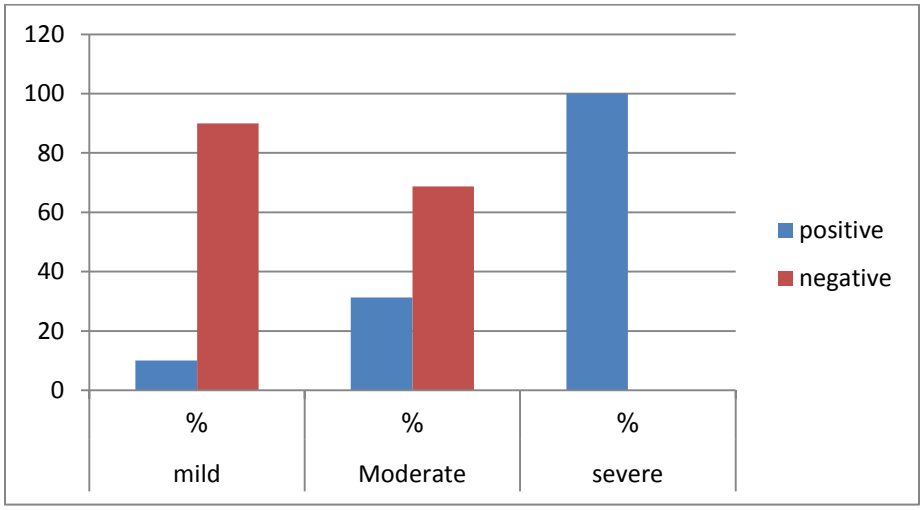


Figure (11):Comparison between percentage of S. aureus isolates in patients with AD according to disease severity in non lesional skin swabs.

Table(17): Comparison between percentage of S. aureus isolates in patients with AD according to age in skin lesional swabs.

	≤2		>2and≤12		>12		Total		Chi-square	
	No	%	No	%	No	%	No	%	X^2	P-value
Positive	12	50	15	83.3	8	100	35	70	9.52	<0.05
Negative	12	50	3	16.7	0	0	15	30		
Total	24	100	18	100	8	100	50	100		

Table(17) and figure (12) show that there is statistically significant increased incidence of skin S. aureus colonization with age of patients .

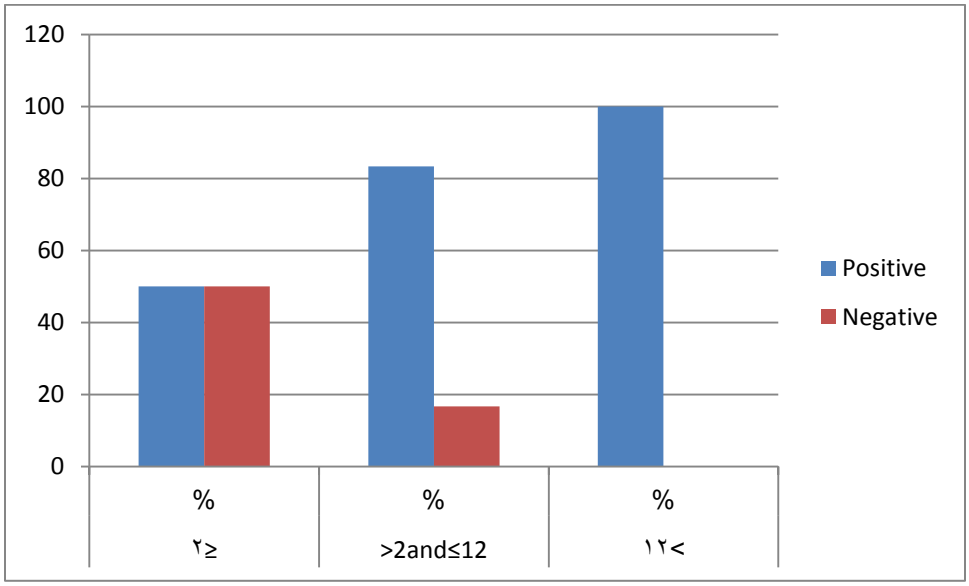


Figure (12): Comparison between percentage of S. aureus isolates in patients with AD according to age in skin lesional swabs.

Table(18): Comparison between percentage of S. aureus isolates in patients with AD according to age in nasal swabs.

	≤2		>2and≤12		>12		Total		Chi-square	
	No	%	No	%	No	%	No	%	X^2	P-value
Positive	6	25	8	44.4	6	75	20	40	6.48	<0.05
Negative	18	75	10	55.6	2	25	30	60		
Total	24	100	18	100	8	100	50	100		

Table(18) and figure (13) show there is statistically significant increased incidence of nasal S. aureus colonization with age of patients.

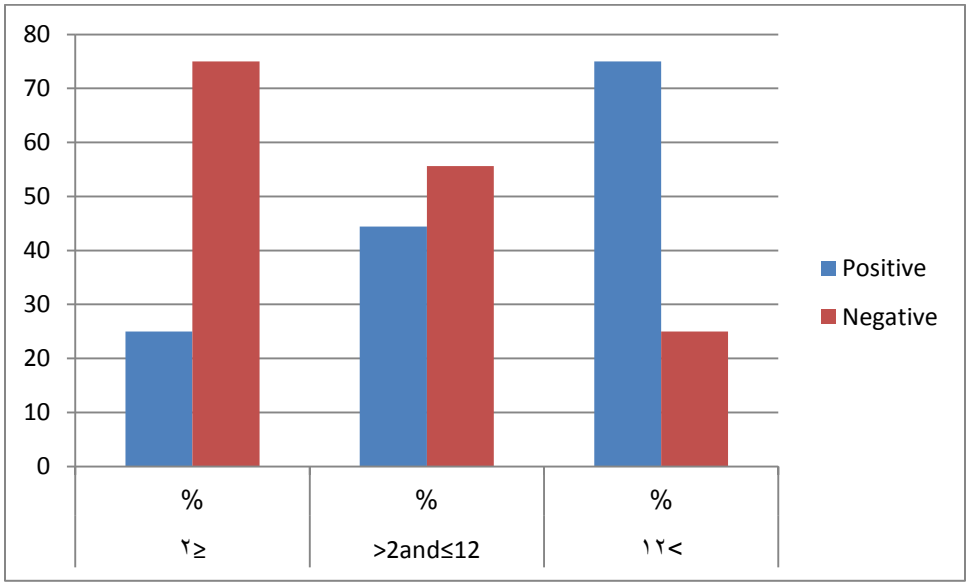


Figure (13): Comparison between percentage of S. aureus isolates in patients with AD according to age in nasal swabs.

Table(19): Correlation between age of patients and severity of AD.

	Severity of AD	
	R	P
Age of patients	0.486	<0.05

Table(19) and figure (14) show that there is Correlation between age of patients and severity of AD.

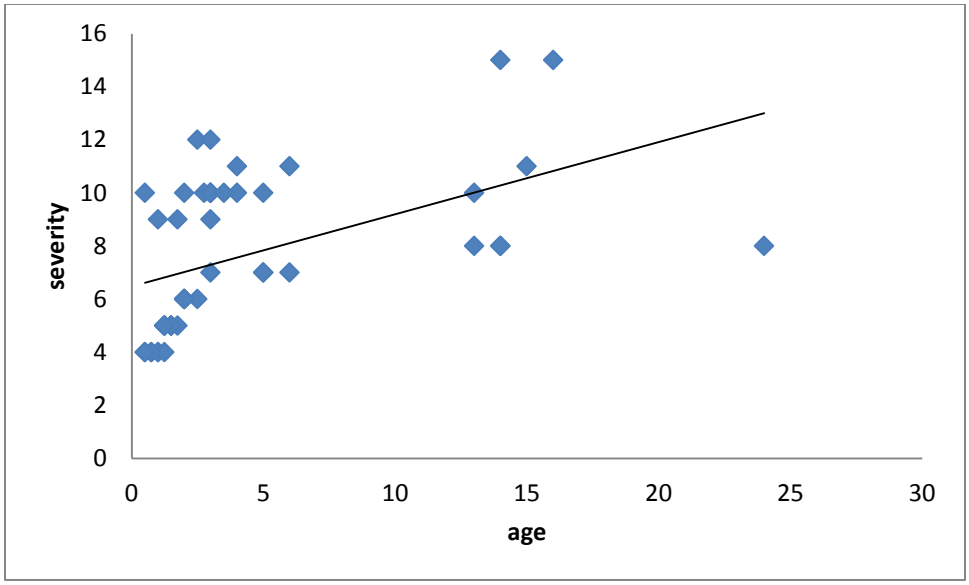


Figure (14): Correlation between age of patients and severity of AD.

Table(20):Comparison between patients AD with other atopic diseases and AD without other atopic diseases according to skin lesion swabs.

	AD with other atopic diseases		AD only		total	Chi-square	
	NO	%	NO	%		X^2	P-value
positive	8	72.7	27	69.2	35	0.050	> 0.05
negative	3	27.3	12	30.8	15		
total	11	100	39	100	50		

Table (20) and figure (15) show that although, S. aureus colonization was higher in patients with other atopic diseases but this was not significant.

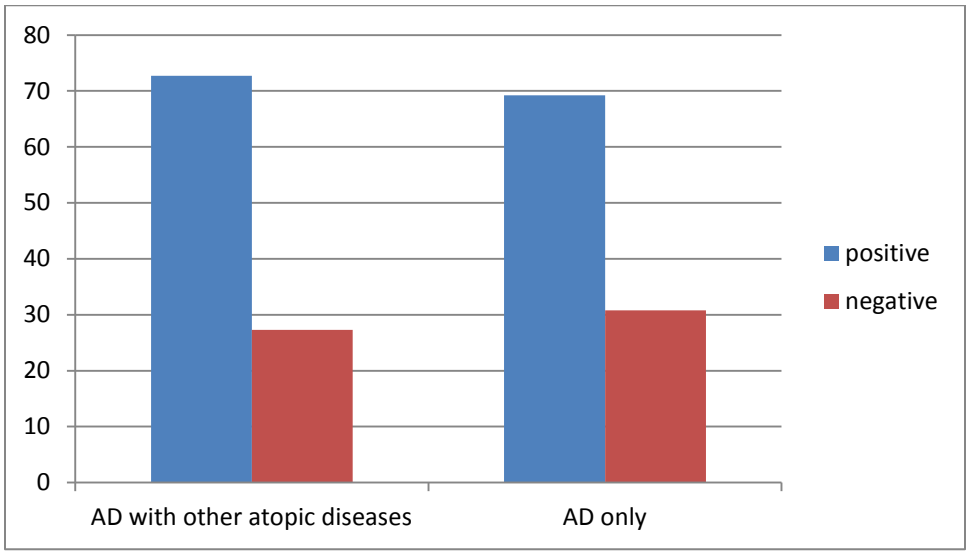


Figure (15): Comparison between patients AD with other atopic diseases and AD patients without other atopic diseases according to skin lesion swabs.

Table(21)Comparison between patients with family history of AD and AD patients without family history(F.H) according to skin lesion swabs.

	AD with F.H		AD only		total	Chi-square	
	NO	%	NO	%		X^2	P-value
positive	13	72.2	22	68.75	35	0.066	> 0.05
negative	5	27.8	10	31.25	15		
total	18	100	32	100	50		

Table(21) and figure (16) show that however, S. aureus colonization was higher in patients with family history of AD but this was not significant .

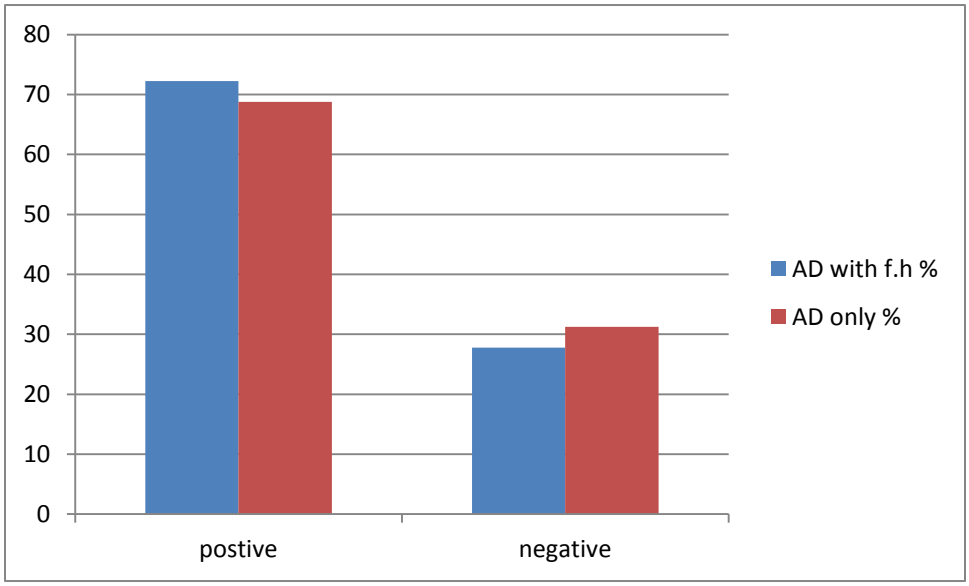


Figure (16):Comparison between patients with family history of AD patient and AD patient without family history according to skin lesion swabs.

Table (22) Percentage of antibiotic sensitivity to S.aureus colonization in skin lesion.

antibiotic senstivity	%
Fusidic acid	97.1
Vancomycin	97.1
Flucloxacillin	91.4
Gentamicin	82.9
Cephalexin	77.1
Erythromycin	51.4
Penicillin	22.9

Table (22) Figure (17) show that antibiotic sensitivity to S. aureus colonization in skin lesion in this study are Fusidic acid 97.1% , Vancomycin 97.1%, Flucloxacillin 91.4% ,Gentamicin 82.9% , Cephalexin 77.1% , Erythromycin 51.4 %, Penicillin 22.9% .

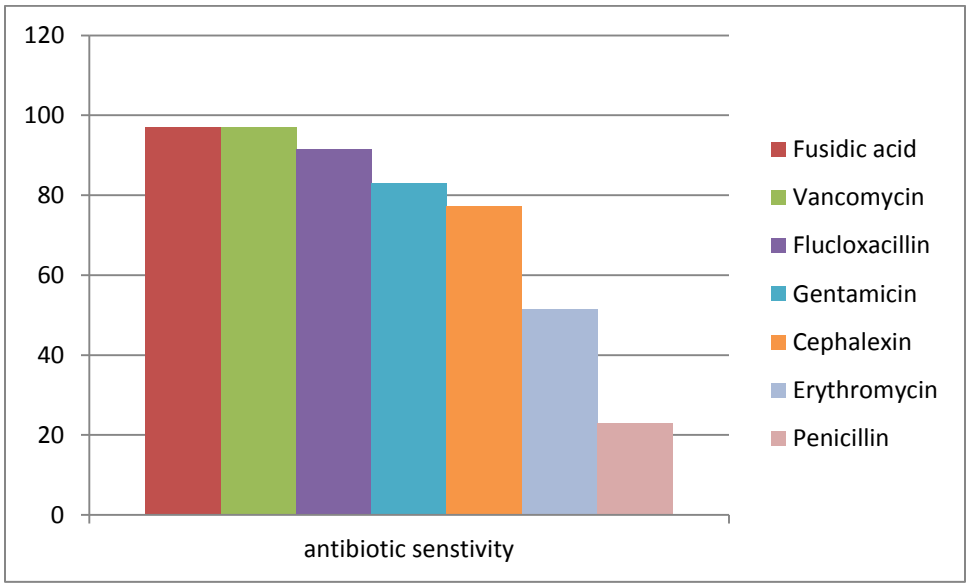


Figure (17): Percentage of antibiotic sensitivity to S.aureus.

Figure (18): Positive culture of. S. aureus on blood agar.

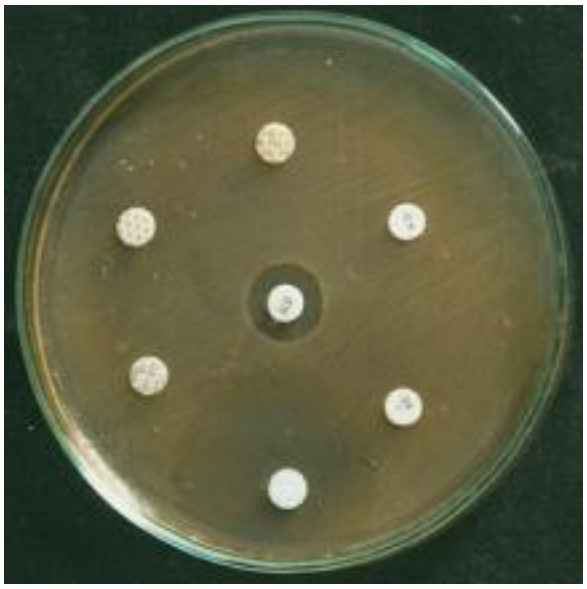


Figure (19): Antibiotic sensitivity test positive sensitivity for Flucloxacillin and fusidic acid .