

Table SI. Characteristics of 202 children with skin manifestations of Lyme borreliosis^a

	SEM n=91 (45%)	MEM n=55 (27%)	BL n=44 (22%)	BLEM n=12 (6%)	Significant differences between groups (<i>p</i> -values)
Gender, M:F, <i>n</i> (ratio)	40:51 (0.78)	34:21 (1.62)	22:22 (1)	8:4 (2)	MEM vs. SEM (0.04)
Age, years, median (range)	8 (1–15)	6 (1–15)	6 (2–12)	9 (5–14)	n.s.
History of tick bite, <i>n</i> (%)					
Total	55 (61)	28 (50)	15 (34)	7 (59)	SEM > BL (0.02)
Multiple	12 (13)	11 (20)	6 (14)	3 (26)	
None	23 (25)	19 (35)	19 (43)	4 (33)	
N/A	13 (14)	8 (15)	10 (23)	1 (8)	
Incubation period after tick bite, days, median (range)	8 (3–70)	15 (1–105)	20 (4–80)	45 (30–150) (refers to BL)	SEM < BLEM (<0.05)
Duration of skin lesion before therapy, days, median (range) ^b	7 (5–120)	10 (4–56)	60 (11–260)	42 (14–140) (refers to BL)	SEM < BL (<0.001) SEM < BLEM (<0.001) MEM < BL (<0.001) MEM < BLEM (<0.05)
Site of skin lesion, <i>n</i> (%)	Head/neck: 34 (38) Leg: 26 (29) Trunk: 14 (15) Armpit/upper arm/shoulder: 14 (15) Groin/buttock: 3 (3)	Generalized: 18 (33) Extremities only: 16 (29) Trunk/extremities: 13 (23) Face/extremities: 6 (11) Trunk: 1 (2) Face: 1 (2)	Ear: 37 (84) Breast: 3 (7) Scrotum: 3 (7) Back: 1 (2)	Ear/cheek: 6 (50) Breast/shoulder: 5 (42) Calf: 1 (8)	BL vs. BLEM (0.008), (refers to ear)
Type of skin lesion, <i>n</i> (%) ^c	Annular: 41 (45) Macular: 33 (37) Atypical: 4 (4) N/A: 13 (14)	Annular: 27 (49) Macular: 4 (7) Annular and macular: 17 (31) N/A: 7 (13)	Plaque: 25 (57) Nodule: 15 (34) N/A: 4 (9)	Annular: 6 (50) Speckled: 3 (25) N/A (refers to EM): 3 (25)	Not applicable
Largest diameter of skin lesion, cm, median (range)	10 (5–30)	8 (5–40) primary lesion 6.5 (3–18) secondary lesions	2 (1–4)	12 (6–40) (refers to EM)	Not applicable
Extracutaneous signs/symptoms, <i>n</i> (%)	30 (33)	22 (40)	3 (7)	3 (25)	SEM > BL (<0.001) MEM > BL (<0.001)

^aThe 2 children with acrodermatitis chronica atrophicans are not shown in this table.

^bFor patients with erythema migrans with multiple lesions, the duration of skin lesion refers to the first erythema noticed by the patient if available, otherwise to the largest erythema.

^cFor patients with erythema migrans with multiple lesions, the type of skin lesion was defined as follows: annular means, all erythemas in a given patient were annular; macular means, all erythemas were macular, and "annular and macular" refers to a mixed pattern of erythemas in one patient.

BL: borrelial lymphocytoma; BLEM: borrelial lymphocytoma plus erythema migrans; MEM: erythema migrans with multiple lesions; N/A: not available; n.s.: not significant; SEM: solitary erythema migrans.

Table SII. Treatment, follow-up and therapeutic outcome in 202 children with dermatologic manifestations of Lyme borreliosis^a

	SEM n=91 (45%)	MEM n=55 (27%)	BL n=44 (22%)	BLEM n=12 (6%)	Significant differences between groups (p-values)
Antibiotic therapy (dosage), n (%)					Not significant
Amoxicillin (50 mg/kg/day)	47 (52)	29 (53)	27 (61)	6 (50)	
Phenoxymethyl penicillin (50,000–100,000 U/kg/day)	32 (35)	21 (38)	13 (30)	3 (26)	
Doxycycline (4 mg/kg/day)	5 (5)	0 (0)	0 (0)	1 (8)	
Cefuroxime (30 mg/kg/day)	3 (4)	1 (2)	1 (2)	1 (8)	
Ceftriaxone (50 mg/kg/day)	1 (1)	0 (0)	0 (0)	0 (0)	
Clarithromycin (15 mg/kg/day)	2 (2)	2 (3)	1 (2)	0 (0)	
Erythromycin (50 mg/kg/day)	1 (1)	1 (2)	0 (0)	0 (0)	
Azithromycin (10 mg/kg/day)	0 (0)	1 (2)	2 (5)	1 (8)	
Duration of therapy, weeks; median (range)	2 (2–4)	3 (2–4)	3 (2–4)	3 (2–4)	Not significant
Duration of skin lesion after initiation of therapy, days; median (range)	6 (4–90)	14 (4–21)	56 (25–290)	7 (4–12) EM 33 (18–49) BL	SEM < BL (<0.001) MEM < BL (<0.001)
Information available, n (%)	62 (68)	40 (73)	28 (64)	6 (50)	
Duration of extracutaneous signs/symptoms after initiation of therapy, days; median (range)	3 (1–90)	2 (1–48)	1 (1–10)	5 (3–5)	Not significant
Information available, n (%) ^b	24 (80)	20 (91)	3 (100)	2 (67)	
Duration of follow-up period, n (%)					Not applicable
≥6 months	21 (23)	19 (34.5)	10 (22.7)	3 (25)	
≥12 months	12 (13.2)	12 (21.8)	5 (11.4)	0 (0)	
Not available for follow-up, n (%)	13 (14.3)	7 (12.7)	5 (11.4)	2 (16.7)	

^aThe 2 children with acrodermatitis chronica atrophicans are not shown in this table.

^bPercentage refers to total number of patients with extracutaneous signs/symptoms.

BL: borreliolymphocytoma; BLEM: borreliolymphocytoma plus erythema migrans; MEM: erythema migrans with multiple lesions; N/A: not available; SEM: solitary erythema migrans.

Table SIII. Differences in skin manifestations of Lyme borreliosis between children and adults

Parameter	Children ^a (reference)	Adults (reference)
SEM/MEM		
Rate of MEM among EM patients	38–40% (20)	4–7% (11)
Predilection site of SEM	Head/neck region (26–38%), trunk (9–43%), leg 17–29% (20, 36)	Leg (55–62%), trunk (21–28%), head (0–7%) (13, 37, 48)
Type of EM	Macular (14–37%) < annular (45–86%) (20, 21, 36)	Macular (66%) > annular (9) (49)
Frequency of local symptoms (e.g., itch, burning, pain)	0–41% (20)	55% (48)
Persistence of extracutaneous symptoms after therapy	None (20)	<10–20% of patients (11)
Borrelial lymphocytoma (BL)		
Prevalence of BL	14–31% of skin manifestations of LB (17, 22)	2% of skin manifestations of LB (9, 11)
Predilection site of BL	Ear (88%), breast (0–13%) (40, 41)	Breast (75–80%), ear (9–15%) (39, 40, 42)
Frequency of extracutaneous symptoms	7–18% (40, 41)	47–55% (40, 42)
Acrodermatitis chronica atrophicans		
Prevalence	11 pediatric cases described (22, 29–35)	1–2% of skin manifestations of LB (11)

^aResult from this study are included in this column.

BLEM: borrelial lymphocytoma plus erythema migrans; EM: erythema migrans; MEM: erythema migrans with multiple lesions; SEM: solitary erythema migrans.