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Cellulitis of the trunk: do these patients need a different diagnostic and management approach?

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Background: Cellulitis is an acute infection of the dermis and the subcutaneous tissues that usually presents in the lower limbs, and radiologic modalities are unnecessary. Previous studies did not find anatomic location to be a significant risk factor for treatment failure or a complicated course. Recent case reports and our own experience led us to hypothesize that cellulitis in sites other than the limbs, especially the trunk, is associated with a more severe clinical course and indicates a different diagnostic approach and treatment.

Material/methods: We searched the electronic files of adult patients with cellulitis in the trunk in 2 medium size hospitals and compared them to patients with cellulitis of the lower limbs. Demographic, clinical and laboratory data was collected and analyzed using binary univariate and multivariate logistic regression analyses. Primary outcome was surgical drainage. Secondary outcomes were imaging studies, length of stay, re-hospitalization and mortality within 30 days.

Results: During the study period 74 patients were diagnosed with trunk cellulitis, and found to be more often female (57% versus 39%, $p=0.032$) and younger (mean age 59.7 years versus 68.4, $p=0.005$) than patients with lower-limbs cellulitis. The only co-morbidity found to be a significant risk factor for trunk cellulitis was malignancy ($p=0.017$, O.R=10, C.I=1.247-81.953). We found a trend for more surgical interventions, the primary outcome, in study group, although not statistically significant (6 patients, 8%, versus 1 patient, 1%, in trunk and legs cellulitis respectively, $p=0.116$, O.R=6.441, C.I=0.756-54.890). Mean length of stay was the only significantly different secondary outcome, with a longer hospital stay in the study group patients (5.8 days versus 4.3 days, $p=0.025$).

By multivariate regression analysis younger age, female gender and malignancy were independent risk factors for trunk cellulitis.

Conclusions: There are risk factors for trunk cellulitis. However, the unique diagnostic and therapeutic approaches are similar, except for a trend for more surgical interventions in patients with trunk cellulitis.

Table: Clinical and laboratory data of patients, by cellulitis location:

Characteristics	Study group (n=74)	Control group (n=74)	P value	Odds ratio	95% confidence interval
Chronic kidney disease	12 (16%)	12 (16%)	1.0	1	0.417-2.397
Diabetes mellitus	27 (36%)	28 (38%)	0.865	0.944	0.484-1.839
Congestive heart failure	7 (9%)	15 (20%)	0.065	0.411	0.157-1.076
Malignancy	9 (12%)	1 (1%)	0.017	10.108	1.247-81.953
Temperature – mean (standard deviation)	37.5 (1.0)	37.0 (1.1)	0.025		
Known port of entry	32 (43%)	43 (58%)	0.071	0.549	0.286-1.054
c-reactive protein – mean (standard deviation)	8.3 (8.5)	9.3 (8.2)	0.366		
White blood cells - mean (standard deviation)	11.2 (4.7)	11.7 (5.2)	0.661		
Creatinine - mean (standard deviation)	1.1 (0.9)	1.2 (0.7)	0.059		